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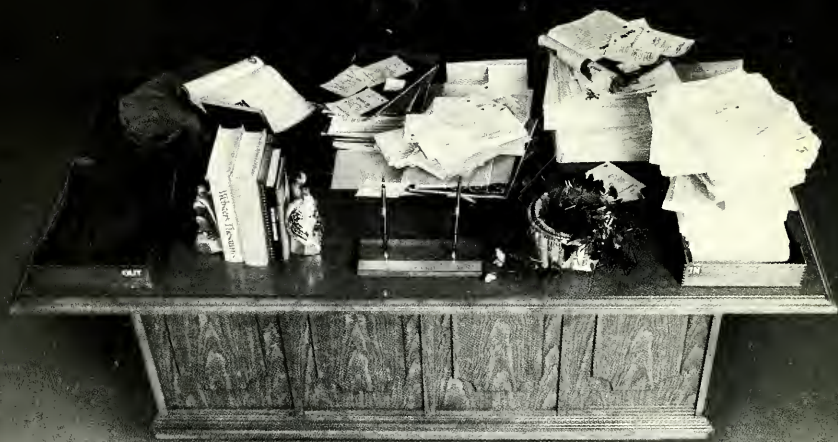
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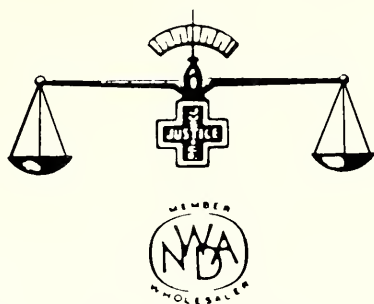
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JANUARY 1984

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VOLUME 64

NUMBER 1

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CONSTITUTION AND BY-LAWS OF THE North Carolina Pharmaceutical Association

Article I—Name

This Association shall be called "The North Carolina Pharmaceutical Association."

Article II—Object

The purpose of this Association shall be to protect the public health and welfare by uniting the pharmacists of this state for the advancement of their profession; to improve the art of pharmacy and to elevate its standards; to restrict the dispensing and sale of medicines to pharmacists; to encourage and promote research and study; to interest competent individuals in the practice of pharmacy as a career; to foster a system of pharmaceutical education and continuation studies; to encourage research and training for all phases of the practice of pharmacy as a means of providing the greatest protection for the public at large; to advance pharmaceutical education and support scholarships in education in pharmacy; to publish and disseminate useful knowledge; to establish and maintain high ethical standards of professional conduct and practices; to promote and encourage relations of good will and respect between pharmacists and other health professions and the public; and to promote mutual cooperation of these disciplines so as to extend their usefulness to the public.

Article III—Membership

This Association shall consist of Active, Life, Student Branch and Honorary Members.

Section 1. ACTIVE MEMBERS. An active member shall be any pharmacist of good moral standing who is registered under the Pharmacy Law of this state with a current renewal certificate and who has paid the annual dues as specified in the By-Laws. Whenever an active member ceases to be a registered pharmacist of this state with a current renewal of registration, his active membership shall terminate unless extended by action of the Executive Committee.

Section 2. LIFE MEMBERS. Any active member who has previously been declared a life member or who qualifies for life membership as specified in the By-Laws shall be exempted from further payment of dues.

Section 3. STUDENT BRANCH MEMBERS. Students enrolled in a School of Pharmacy within the limits of the state, are eligible for membership in the Student Branch of the N. C. Pharmaceutical Association at the annual membership fee as specified in the By-Laws of this Association. Members of the Student Branch shall not have the privilege of voting or holding office but shall be entitled to all other rights of membership.

Section 4. HONORARY MEMBERS. Any person whose contribution to Pharmacy, or whose knowledge of Pharmacy and the Collateral Sciences shall, in the opinion of the Association, merit that distinction, may upon nomination by the NCPHA Executive Committee be elected an Honorary Member. Honorary Members shall be exempted from the payment of dues; they shall receive the publications of the Association, but they shall not have the right to vote or to hold office in the Association.

Article IV—Officers

The Association shall have the following officers: a President, a First Vice-President who shall be President-Elect; a Second Vice-President; a Third Vice-President; and a Secretary-Treasurer.

The three Vice-Presidents shall be elected annually by mail ballot and shall hold office until their successors are elected and have qualified. The First Vice-President (President-Elect) shall automatically assume the office of Presidency without being subject to further election.

The President, the three ranking Vice-Presidents, and the Secretary-Treasurer shall be ex-officio members of the Executive Committee. Each retiring President shall be a member of the Executive Committee for a three-year term.

Article V—Amending Constitution

Every proposition to alter or amend this Constitution shall be submitted in writing and received at an annual meeting, and may be voted on at the next annual meeting when, upon receiving a vote of three-fourths of the members present, it shall become a part of the Constitution of the North Carolina Pharmaceutical Association.

BY-LAWS

Article I—Election of Officers

Section 1. A Nominating Committee of seven members shall be annually chosen by the President and charged with the duty of selecting candidates for the offices of first, second, and third vice-presidents, and three members-at-large of the Executive Committee of the N. C. Pharmaceutical Association; one member of the North Carolina Board of Pharmacy; and four Directors of the North Carolina Pharmaceutical Research Foundation, Inc.

Section 2. The Nominating Committee shall submit at the last session of each annual convention the names of two or more persons or candidates for each of the offices of First Vice-President (President-Elect), Second Vice-President, Third Vice-President; six persons for three places as members-at-large of the Executive Committee; two or more persons for members of the North Carolina Board of Pharmacy; eight or more persons as candidates for four directorships of the N. C. Pharmaceutical Research Foundation, Inc. Additional nominations may be made from the floor.

Section 3. No less than thirty days prior to the annual convention, the president of the Association shall select a committee of three pharmacists from the district of the member of the Board of Pharmacy whose term expires the following year. It shall be the duty of this committee to recommend two candidates from their district to the NCPHA Nominating Committee for membership on the Board of Pharmacy. The recommendation of the district committee shall be final unless altered by a majority vote of members present and voting at a meeting of the Nominating Committee. Candidates for membership on the Board of Pharmacy may be nominated from the floor; but such nominees must practice pharmacy in the district entitled to the nomination.

Section 4. The names of the candidates so nominated shall be submitted by the Secretary-Treasurer by mail to every member of the Association within one month after he receives them, together with the request that the members indicate their preference on a ballot enclosed for that purpose, and return the same by mail within one month.

The ballots received as indicated in the preceding paragraph are to be sent to an "Election Committee" in care of the Secretary-Treasurer, Chapel Hill. The Election Committee shall consist of four members, each selected by mail ballot for a term of three years. The Election Committee shall count as votes in the annual election only those ballots received from members whose dues have been paid for the current year. The Election Committee shall certify to the Secretary-Treasurer the results of the tally after which the latter shall be published.

The Secretary-Treasurer shall notify all candidates of the time and place of the meeting of the Election Committee and extend a written invitation to attend the counting of the ballots.

Sectin 5. The officers thus elected by a plurality of the votes shall be installed at the final session of the next annual meeting.

Article II—Duties of Officers

Section 1. THE PRESIDENT. The President shall preside at all meetings of the Association, enforce a due observance of the provisions of the Constitution and By-Laws and parliamentary proceedings; he shall appoint all committees and delegates not otherwise provided for or ordered by the Association; he shall be ex officio member of all committees and delegations; he shall fill by appointment all vacancies occurring in office excepting the offices of vice-presidents, and also occurring in committees and the Executive Committee by reason of death, resignation, or inability to act; he shall be chairman of the Executive Committee; he shall present, at the annual session of the Association, a report upon the operations of the Association during his term of office, and an address upon such subjects as he may select and shall make such suggestions as he may deem suitable to promote the objects and welfare of the Association.

(continued on page 7)

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Community Pharmacist
Lubbock, Texas



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Marilyn Stotteldt, Pharm.D.
Clinical Services
Good Samaritan Hospital
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Donald Hoscheit, R.Ph.
Vice President, Pharmacy
Osco Drug Inc.
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Martin Lambert, Ph.D., R.Ph.
Community Pharmacist
Knoxville, Tennessee



Stephen D. Roath, R.Ph.
Vice President, Director of
Professional Affairs
Longs Drug Stores Inc.
Walnut Creek, California



John Colaizzi, Ph.D.
Dean, College of Pharmacy
Rutgers University
Piscataway, New Jersey



Paul Burkhardt, R.Ph.
Director of Pharmacy
University of Maryland Hospital
Baltimore, Maryland



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Institutional Pharmacist
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Constitution and Bylaws

Section 2. THE VICE-PRESIDENT. (a) The First Vice-President shall be the president-elect of the Association, and a member of the Executive Committee. In the absence of the President, he shall perform the duties of that office. If the office of the President shall be vacated by reason of death, the First Vice-President shall become the President of the Association.

(b) The Second Vice-President shall be a member of the Executive Committee. In the absence of the President and the First Vice-President, he shall perform the duties of the President. In the absence of the First Vice-President, he shall perform the duties of that officer. (c) The Third Vice-President shall be a member of the Executive Committee and in the absence of the President and the two vice-presidents, shall perform the duties of the President. (d) In the event that the office of the President-elect and/or Second or Third Vice-Presidents be vacated for any reason whatever, such office shall be filled only by special election.

Section 3. THE SECRETARY-TREASURER. The Secretary-Treasurer shall keep correct records of all proceedings of the Association; a list of the names, residence and date of admission of each member; he shall collect all dues and all other monies due the Association and shall promptly deposit same in such depositories as the Executive Committee shall designate; he shall conduct the official correspondence of the Association and notify each member by mail of the meetings; he shall make disbursements only as directed or outlined by the Executive Committee and maintain all records pertaining thereto; he shall carefully preserve all papers and archives of the Association; he shall edit and distribute the Carolina Journal of Pharmacy and the Proceedings of the Association; he shall act as secretary to all committees of the Association and he shall discharge such other duties as the Executive Committee shall assign to him. He shall be bonded by an indemnity bonding company for a sum not less than \$10,000 and after approval of the Executive Committee, the fee for said bond being paid by the Association; he shall receive such annual salary as the Executive Committee may from time to time determine. A

certified public accountant shall be engaged annually to audit the financial accounts of the Secretary-Treasurer.

Article III—Of Committees

Section 1. There shall be four standing committees: an Executive Committee in accordance with Subsection (a) of this Article; a Legislative Committee of seven members together with such nonvoting advisory members as the President may deem it wise to appoint; a nominating Committee in accordance with By-Laws Article I, Election of Officers; a Resolutions Committee of five members.

Subsection (a). THE EXECUTIVE COMMITTEE. The Executive Committee shall consist of the President, the First Vice-President, the Second Vice-President, the Third Vice-President, the Immediate Past-President, the Secretary-Treasurer, two past-presidents as provided in Article IV of the Constitution; and three elected members-at-large.

It shall be the duty of the Executive Committee to take into consideration and act upon all matters of business between annual meetings, and upon all propositions for membership; to approve all bonds protecting the funds of the Association; to select depositories in which the funds and securities of the Association are to be deposited; to direct the investments of funds of the Association; to contract for and make necessary arrangements for editing and publishing the Annual Proceedings, the Carolina Journal of Pharmacy, and such other publications as the Association may direct; and to perform such other duties as may from time to time be referred to it. It shall also have general charge of and final authority over all affairs of the Association which are not specifically provided for elsewhere in the By-Laws.

Subsection (b). THE LEGISLATIVE COMMITTEE. It shall be the duty of the Legislative Committee to use its efforts in sponsoring the passage of such legislation as the Association may specifically recommend, and to oppose such legislation as the Association resolves to oppose. During the intervals between annual meetings of the Association, if anticipated legislative developments occur, the Legislative Committee shall ask for a called meeting of the Executive Committee

(continued on page 8)

Constitution and Bylaws

in order that the latter committee may act officially for the Association in advising, approving, or opposing such measures or methods as the Legislative Committee may present. This Committee may use its discretion in withholding any information which it deems unwise or unnecessary to publish. With this qualification, the report shall be presented to the Association by the Chairman of the Legislative Committee or his appointed representative.

Subsection (c). **THE RESOLUTIONS COMMITTEE.** The Committee on Resolutions shall meet together and decide on matters upon which the organization shall take a public stand. The Committee shall also receive all resolutions which may be referred to it by the Association members for study at any annual meeting, provided they are presented in writing to the committee no later than the first full day of the annual meeting if the meeting is scheduled for more than one day and no later than noon if the meeting is scheduled for one day only.

Section 2. APPOINTIVE COMMITTEES. The President shall appoint the following committees to be assigned applicable powers and duties, consistent with the Association's Constitution and By-Laws:

- A. Continuing Education
- B. Consolidated Pharmacy Loan Fund
- C. Delivery of Pharmaceutical Service
- D. Endowment Fund (NCPhA/Institute)
- E. Hospital Pharmacy
- F. Mental Health
- G. Nursing Homes/Extended Care Facilities
- H. Professional Relations
- I. Public Relations
- J. Public Health and Welfare
- K. Social and Economic Relations

Other committees may be appointed by the President to perform such special duties as may be assigned by the President and/or the Executive Committee.

Article IV—Of Membership

Section 1. ACTIVE MEMBERS. Every pharmacist meeting the qualifications of Article III, Section I of the Constitution, or every graduate of an accredited school of pharmacy

is eligible for active membership in the North Carolina Pharmaceutical Association. Applicant will complete membership form available from Association office, and submit together with annual dues in accordance with Sub-section (a).

Subsection (a). **DUES.** Every member shall pay in advance into the hands of the Secretary-Treasurer the sum of sixty dollars as yearly contribution, except those pharmacists residing out-of-state who shall pay thirty dollars. Pharmacists who are retired and on Social Security shall pay one-half the annual dues structure. Husband and wife pharmacists shall pay one and one-half the annual dues structure and shall receive one mailing, with the exception of Association mail elections, for which they shall each receive a ballot.

Subsection (b). **NON-PAYMENT.** Any member in arrears at any annual meeting shall not be entitled to vote; anyone neglecting to pay his annual dues shall lose his membership.

Section 2. LIFE MEMBERS. Any member in good standing is eligible for a life membership and thereafter he shall be exempt from all future annual dues. The cost of such membership shall be ten times the individual's maximum annual dues.

Also, the Executive Committee is empowered to vote into Life Membership a member whose contributions to his profession and/or the Association have been so outstanding that he merits this honor.

Section 3. STUDENT BRANCH. Any student in a School of Pharmacy meeting the qualifications of Article III, Section 3 of the Constitution, and paying the annual dues of one dollar is eligible for membership as specified in the above-named section.

Section 4. HONORARY MEMBERS. Honorary Membership may be conferred upon nonmembers who have made noteworthy contributions to the Association. Nomination for such honorary membership shall be made to the Executive Committee, who shall consider and act upon such nomination. Honorary members shall have the privilege of attending annual meetings of the Association but shall not enjoy any other rights or privileges of membership in the organization.

Article V—Of Meetings

Section 1. Association meetings shall be held annually, or from time to time, as the Association may determine, provided that in case of failure of this from any cause, the duty of calling the Association together shall devolve upon the President, or upon the Vice-Presidents, with the advice and consent of the Executive Committee.

Special meetings may be held upon written request of fifteen members, who shall state the purpose thereof, and only such matters shall be considered at such a meeting.

Section 2. At the opening of each annual meeting, in the absence of the President, or Vice-President, one of the Executive Committee shall take the chair. In the absence of all, a President pro tempore shall be elected by the members present. In the absence of the Secretary-Treasurer, the presiding officer shall appoint a Secretary pro tempore.

Section 3. Fifty members constitute a quorum.

Section 4. REGISTRATION FEE. A registration fee shall be paid by each person participating in the affairs of the annual convention, except for student branch members. The amount of such fee shall be fixed annually by the Executive Committee.

Article VI—Of Branches

Section 1. There shall be a students' branch within the Association, the membership of which shall be composed of and limited to regularly enrolled students in a School of Pharmacy within the borders of North Carolina. The Branch must organize itself, elect a president, a secretary, and a treasurer. These officers shall be responsible to the Secretary-Treasurer of the Association for funds collected as annual Association dues. It shall have a constitution and set of by-laws which shall be approved by the Executive Committee of the Association.

No action taken by such Branch shall bind the Association in any way save when a proposed action is submitted as a recommendation to the Executive Committee prior to the annual meeting. If the Executive Committee gives its approval the recommendation may be submitted first to the general membership at a regular meeting and then assigned to the Committee on Resolutions for study and report in the usual manner.

Article VII—Of Delegates

Section 1. The President shall annually appoint two delegates to the American Pharmaceutical Association and two to the National Association of Retail Druggists.

Article VIII—Amending the By-Laws

Section 1. Every proposition to alter or amend these By-Laws shall be submitted in writing at one session of the annual meeting and shall be balloted on at a subsequent session when, upon receiving a vote of two-thirds of members present, it shall become part of the By-Laws.

Revised: January 1979

REVIEW OF THE CONSTITUTION AND BYLAWS

An ad hoc committee is examining the Constitution and Bylaws of the NCPHA in the light of current Association needs and policy. If you have any suggestions, please contact the committee chairman, Jean Paul Gagnon, UNC School of Pharmacy, Beard Hall, 200-H, Chapel Hill 27514. A report from this committee is expected at the Annual Meeting in April.

*Remember the Day
...in Pictures*

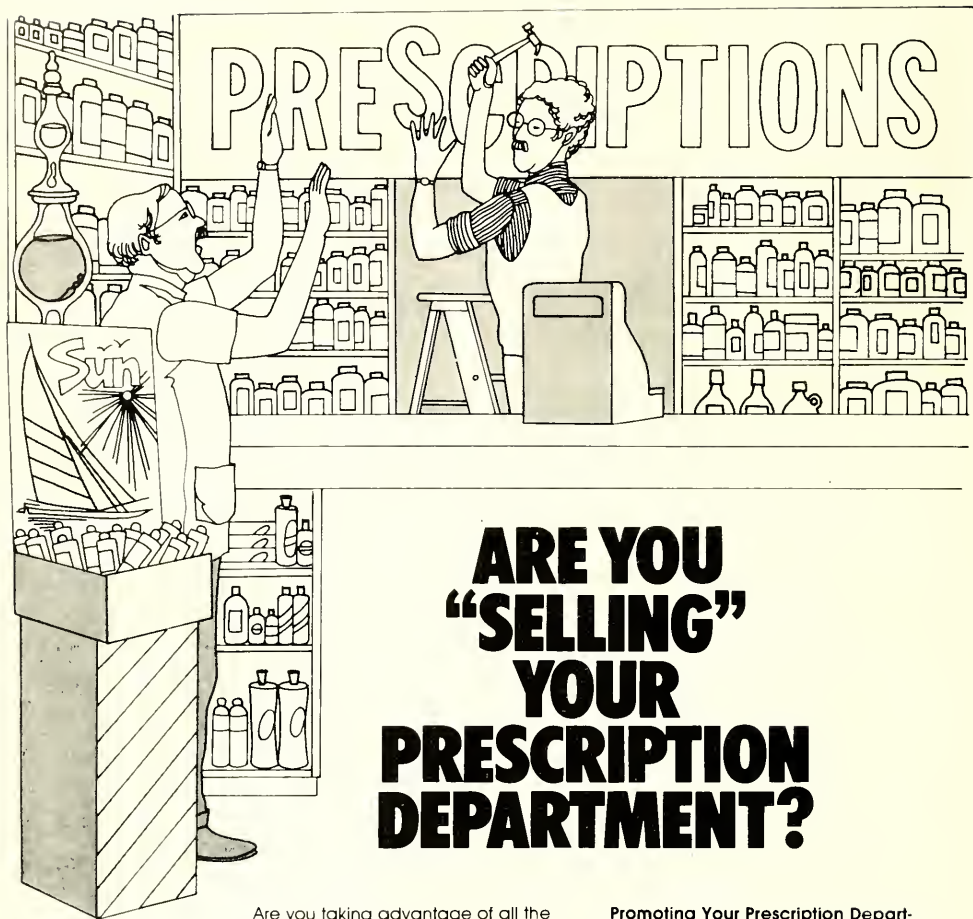


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WILLIAM S. APPLE (1918-1983)
APhA PRESIDENT
AND PHARMACY LEADER

William S. Apple, 65, president of the American Pharmaceutical Association died of cardiac arrest on Saturday, December 17 at RFK Stadium in Washington, DC, immediately following the Redskins-Giants football game.

Born in Spokane, Washington, July 28, 1918, and reared in Duluth, Minnesota, Dr. Apple grew up in, was educated in, and spent his working life in the profession of pharmacy. He had been serving as the chief executive officer of the American Pharmaceutical Association since 1959, and was scheduled to retire December 31, 1985.

Dr. Apple attended Wayne State University and then transferred to the University of Wisconsin where he received his Bachelor of Science in Pharmacy (*magna cum laude*) in 1949, his Masters in Business Administration in 1951, and his Doctor of Philosophy—Pharmacy in 1954. He was licensed as a Registered Pharmacist in Wisconsin on July 15, 1950.

Dr. Apple joined the faculty of the University of Wisconsin in 1950 as an instructor, then as assistant professor, and finally as associate professor where he served as the first head of the Department of Pharmacy Administration. During this period he also served as president and chairman of the Board of the Wisconsin Pharmaceutical Association.

Early in 1958 Dr. Apple was elected the executive secretary of the Wisconsin Pharmaceutical Association, but before he assumed that position, he was selected as the secretary-nominate of the American Pharmaceutical Association, a position he held from July 1, 1958, to August 23, 1959, when he became APhA's chief executive officer.

During his tenure of service, Dr. Apple received every major award in the field of professional pharmacy, held numerous offices in the health services area, and was awarded Honorary Doctor of Science degrees from both Long Island University in 1966

and from Union University in 1969. He served as president of the American Council on Pharmaceutical Education from 1964 to 1969; member of the Board of Directors and vice-president of the National Health Council from 1961 to 1968; and secretary, vice-president and president of the National Drug Trade Conference from 1967 to 1970.

Dr. Apple received worldwide recognition for his contributions to pharmacy. He served as a member of the council from 1959 to 1977 and as vice-president from 1974-1978 of the International Pharmaceutical Federation; as a member of the Board of Directors and vice-president of the American Association for World Health from 1970 to 1978; and was made an Honorary Member of various foreign pharmaceutical associations, including those of Chile in 1961, Japan in 1971, Canada in 1975, and Great Britain in 1976.

His professional and honorary memberships include Phi Lambda Upsilon, Rho Chi, and Phi Kappa Phi. His awards include *American Druggist* Many of the Year (1961 and 1967—the only recipient to be twice selected), the J. Leon Lascoff Memorial Award (1961), Rho Pi Phi Man of the Year (1961), the Wayne State University Distinguished Service Award (1962), the University of Wisconsin Citation (1965), the Hugo H. Schaefer Medal (1966), and the Remington Honor Medal (1967).

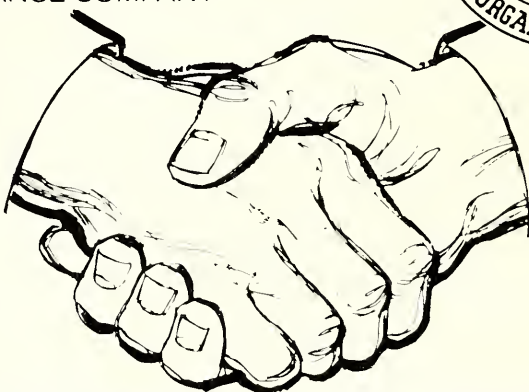
Dr. Apple testified more than 50 times before congressional committees; served as a consultant to the U.S. Department of Health, Education and Welfare (now Department of Health and Human Services) as well as to many foreign government officials; and published more than a hundred articles and presented hundreds of lectures around the world.

Survivors include his wife, the former Lucille Josephs of Phillips, Wisconsin; a brother, Sam Apple of St. Paul, Minnesota; a sister, Vivian Libby of Detroit, Michigan; a daughter, Chandra Eden Apple (age 16), and a son, Hugh Charles Apple (age 15), who reside with their mother at 6423 Crosswoods Drive, Falls Church, Virginia 22044.

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A GUIDE TO THE PROSPECTIVE PAYMENT REGULATIONS MEDICARE REIMBURSEMENT

Analysis by the National Pharmaceutical Council

Background

The Social Security Amendments of 1965 (Public Law 89-97) established Title XVIII of the Social Security Act which authorized the establishment of the Medicare program to pay part of the costs of health care services furnished to eligible beneficiaries. Part A of the program (hospital insurance) provides basic health insurance protection against the costs of inpatient hospital care and other inpatient or home health care. Part B of the program (supplementary medical insurance) provides voluntary supplementary insurance covering most physician services and certain other items and services not covered under Part A.

Generally, there are two basis for payment under the Medicare program. The first is "reasonable cost." Essentially, reasonable costs include all direct and indirect costs that are necessary and proper for the efficient delivery of needed health services to beneficiaries. The second basis of payment, "reasonable charge," is for physician services and other medical and health services not furnished directly by a provider of services or others under an arrangement with the provider.

Introduction

Since the inception of the Medicare program, hospitals have been reimbursed for inpatient services rendered to Medicare beneficiaries on the basis of a retrospective cost-based system. Reimbursement was based on a hospital's "reasonable costs" which for the most part represented its actual costs.

Because this system did not promote efficiency and became increasingly costly, it was modified somewhat beginning in 1972 with the adoption of the so-called "Section 223" limits, under which limits were placed on the amount Medicare would reimburse for general inpatient routine service costs. The system was further modified when the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) (1) expanded the "Section 223" limits to apply on a per discharge or a per case basis, to total inpatient operating costs (all routine, ancillary and special

care unit operating costs), and (2) added the limits on the rate of increase in inpatient operating costs. The TEFRA legislation also directed the Secretary of HHS to develop and report to Congress on proposals for reimbursing hospitals under Medicare on a prospective basis. In December 1982, the Secretary forwarded this report to Congress and it formed the basis for Title VI of the Social Security Amendments of 1983 ("Prospective Payment for Medicare Inpatient Hospital Services").

The rationale for reimbursing hospitals on the basis of prospective payment systems is that it will create an incentive for hospitals to operate in a more efficient manner. Thus, under the system, hospitals will be allowed to retain the amount reimbursed that is in excess of their costs. On the other hand, however, hospitals will have to absorb the costs that exceed the reimbursement amount.

Prospective payment—DRG rates

Since 1969, researchers at Yale University have been developing a method for categorizing patients into diagnosis related groups (DRGs). Using 1.4 million records from 325 hospitals, the researchers found that all patients can be categorized into 467 different groups or DRGs that are clinically coherent and relatively homogeneous with respect to resource use. The DRGs take into account the primary diagnosis of the patient, the secondary diagnosis, the primary procedure utilized to treat the patient, the age of the patient, and the patient's discharge status. Title VI of the 1983 Social Security Amendments incorporates the DRG system by requiring the Secretary to determine, prospectively, a payment amount for each Medicare hospital discharge. Hospital cases or discharges are classified into DRGs under the legislation.¹

Nine Census Divisions

In order to moderate the impact of the prospective payment amounts on urban and rural hospitals across different regions of the country, separate payment rates will be

(continued on page 14)

Prospective Payment Regulations

applied to urban and rural areas of each of the nine census divisions of the country. (The nine census divisions are those established by the Bureau of the Census.) However, these regional adjustments will only apply for the first three years that the prospective payment system is in effect, and, beginning with the fourth year of the program (October 1, 1986), payment will be based entirely on national DRG prospective payment rates.

Phase in period

In order to minimize the disruption that might occur from sudden changes in the reimbursement levels, the prospective payment system will be phased in over a three year period beginning with each hospital's first cost reporting period starting after September 1983. Payments will be made as follows during the three year period:

In the fourth year, (beginning on or after October 1, 1986), the program will be fully phased in and payment will be based entirely on the national DRG payment rates.

	commencing October 1983	October 1984	October 1985	October 1986
Hospital Component	75%	50%	25%	0
Regional Component	25%	37.5%	37.5%	0
National Component	0	12.5%	37.5%	100%

Cost Reporting System

The legislation requires that the Secretary maintain a system of cost reporting during the transition period and for at least two years after the prospective payment system has been fully implemented (at least until the end of 1988 fiscal year). This will assure that cost data is available to aid in making future adjustments in the system and other uses. In addition, the legislation requires that the DRGs and weighting factors be adjusted at least once every four years, starting with the 1986 fiscal year.

Excluded from the prospective rate and payable on a reasonable cost basis are capital-related costs, direct medical education costs, kidney acquisition costs, and the costs of medical and surgical services of physicians in teaching hospitals.

Additional payments based on prospective rates will be made for indirect costs of graduate medical education, outliers, bad

debts, and transfers. (Outliers are cases that have an extremely long length of stay or unusual high cost when compared to most discharges classified in the same DRG.)

Under the prospective payment system, payment will be made to the hospital on a per discharge basis. Therefore, hospitals may have incentives to increase admissions or reduce services. To safeguard against such practices, the statutes requires the establishment of a monitoring system to review admission practices and quality of care. If an abuse of the prospective payment system is discovered, (e.g. unnecessary multiple admissions of the same beneficiary or inappropriate practices), payment may be partially or totally denied to the hospital.

Major Features

The prospective payment system will apply to all inpatient hospital services furnished by all hospitals participating in the Medicare program *except* for those hospitals or units such as: psychiatric hospitals; rehabilitation hospitals; childrens hospitals; long-

term stay hospitals; hospitals outside the fifty states and the District of Columbia; and the hospitals in the states of Maryland, New York, New Jersey and Connecticut which are exempt from PPS because these states have an approved alternative payments programs.

Other special cases also excluded from PPS: payment of emergency services to Medicare beneficiaries at hospitals not participating in Medicare; renal and other services at Veterans Administrations hospitals to Medicare patients; and Health Maintenance Organizations (HMOs) or Competitive Medical Plans (CMPs) that receive Medicare payments on a risk basis, as they may chose to have the payments made by HCFA directly to hospitals providing inpatient services to these plans' enrollees. If this option is not exercised, the HMO or CMP may negotiate its own rate with the hospital. If the option is elected, the hospital will be payed under PPS or reasonable cost reimbursement.

For the first year in which the prospective payment system is in effect, some hospitals subject to the system, will receive, in addition to the prospective payment, payment for capital costs, and costs (if applicable) for approved educational programs determined on a reasonable cost basis, an adjustment for indirect teaching costs, and additional payments for atypical or outlier cases, plus various exceptions and adjustments.

The Secretary of HHS was required to publish in the Federal Register, not later than September 1, 1983, a notice of the *interim* final prospective payment rates. The Secretary will allow for a period of public comment in connection with that notice, but payment based on the prospective rates will become effective on 1 October 1983 without the necessity of the Secretary first considering the comments received. However, after considering the comments, the Secretary, through a notice published in the Federal Register by *December 31, 1983*, must affirm or modify the prospective payment amounts.

The Secretary is also required to publish in the Federal Register on or before September 1 of each fiscal year (beginning with the 1984 fiscal year) a description of the method and data used in computing the DRG prospective payments for the fiscal year.

Hospitals also must participate in admissions and quality review programs. Beginning October 1, 1984, hospitals must contract with a professional review organization (PRO) to review admission patterns, length of stays, transfers, services furnished in outlier cases, validity of diagnosis coding information, and quality of care. Until PROs are in place, reviews will be performed by existing PSROs or fiscal intermediaries.

Congress gave HCFA discretion to grant exceptions and adjustments to sole community providers, cancer and public hospitals and regional and national referral centers. HCFA has crafted a strict exemptions policy under which hospitals may qualify for this exemption: located no more than 50 miles from another hospital; no more than 25% of the residents in the service area are admitted to like hospitals; or, because of geographic or weather conditions, other hospitals are not accessible year round.

The law requires that the director of the Congressional Office of Technology Assess-

ment (OTA) appoint a prospective payment commission. This commission, a body of independent experts, will consist of fifteen individuals and the first appointments will be made not later than April 1, 1984. The term of office will be for three years, but shorter terms may be utilized initially to insure that the terms of no more than seven members will expire in one year. In addition to its duties in connection with the annual increase in prospective payment rates and in making recommendations regarding the DRG classifications and weighting factors, the commission is required to provide expertise and experience in the provision and financing of health care relating to the following: physicians and registered professional nurses, employers, third party payers, individuals skilled in biomedical health services, health economics research, and individuals expert in the research and development of technological and scientific advances in health care. In addition, for the purpose of assessing the safety, efficacy, the cost-effectiveness of new and existing medical and surgical procedures, the commission will collect and assess information outlined above. The commission is required to utilize existing information, both published and unpublished, award grants or contracts for original research and information including clinical research where existing information is inadequate, and adopt procedures allowing any interested party to submit information on medical and surgical procedures on new practices such as the use of new technologies and treatment methods.

In connection with prospective reimbursement, the Secretary is required to study and report to Congress on the following topics: Capital related costs, skilled nursing facilities, the impact of payment methodology, physician service to hospitalized patients, and recommendations for including the territories, i.e. Puerto Rico, under the prospective payment system.

Additional specifics regarding the implementation of prospective payments (DRGs) are detailed in the Federal Register of 1 September 1983, Volume 48, No. 171, "Department of Health and Human Services, HCFA, 42 CFR Parts 405, 409 and 489, interim final rule."

¹ Commerce Clearing House, Inc.

² Federal Register, Volume 48, No. 171.

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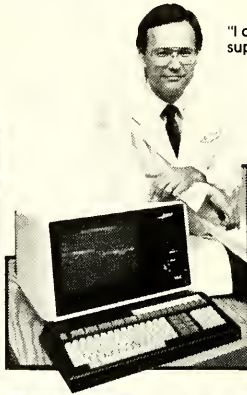
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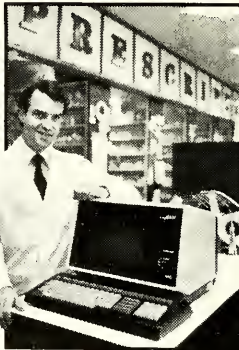


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MINUTES

COMMITTEE ON EMPLOYER/ EMPLOYEE RELATIONS

The Committee on Employer/Employee Relations met on November 6, 1983 at 2:00 pm at the Institute of Pharmacy in Chapel Hill, NC. Present were Sue Hudson, Chairman, Betsy W. Rullman, Patricia Giddings, Olen C. Naylor, Donald V. Peterson, Henry L. Smith, and Ernest J. Rabil. Absent was William A. Merrill.

The meeting was called to order by Sue Hudson, Chairman and the following topics discussed:

1. The committee encourages the cooperation and support of the employer to permit and encourage their employees to attend continuing education seminars, the employer allowing for some time off, supportive personnel, and financial support for these seminars as much as possible. The committee further recommends that recent graduates and prospective employees inquire about the provisions available in this regard during their job interviews.
2. The committee recommends that some management training courses be made available for students in the School of Pharmacy (possibly as an elective course) and for practicing pharmacists through continuing education programs.
3. It was brought to the attention of the committee that the Pharmacy Department still comes under the Nursing Department in the hospital organizational chart in some hospitals. The committee recommends Pharmacy Directors in this situation bring this issue before the hospital administrator and asked that the Pharmacy Department and Nursing Department be made equal under the supervision of the hospital administrator.
4. The committee noted that the employer has the right to expect certain things from the employee under the conditions of employment; these expectations to include loyalty, customer relations, reasonable professional relations, NO DRUG ABUSE, dependability, etc.
5. The committee recommends the employer have a system of employee evaluations, these evaluations being at least semi-annually. Employee evaluations would open a direct line of communication between the employer and employee and allow each to know what is expected of the other in regard to the job. Employee evaluations allow a system of goal-setting, a system of detecting possible problems of employment before they get out of hand, and on-the-job management training of the employees involved. The committee further recommends that each employee maintain a file of work achievements, problems, etc. to discuss with their employer during evaluations, and that the employee also maintain a file of continuing education credits.
6. Discussion arose concerning polygraph testing and chemical testing by employers. The statement made by the committee at the 1983 convention in Boone was discussed and further recommendations will be made at our next meeting.
7. It was brought to the attention of the committee the availability of the "Impaired Pharmacists Task Force." The committee agreed that the task force will be of great benefit for those people who use them, but the problem still arises concerning those pharmacists who will not admit that they have a problem.
8. The committee voiced great concern over a growing problem within our pharmacy community in regard to the increase personal use and/or sell of drugs by some pharmacy students and practicing pharmacists. It was decided that a resolution be drafted and sent to the Executive Committee of NCPHA for immediate attention. Being no further discussion at this time, the meeting was adjourned at 4:00 pm, with provisions being made for another meeting of the committee to be held late January or early February. Committee members will be informed as to date and time. The committee members were encouraged to ask their colleagues as to further possible problems to be discussed at the time of the next meeting.

(continued on page 18)

RESOLUTION:

TO: The North Carolina Board of Pharmacy

RESOLUTION: PERSONAL USE AND/OR SELLING OF DRUGS BY PHARMACISTS

Whereas, there is an increase in the personal use of drugs and/or selling of drugs by some students and practicing pharmacists in the state of North Carolina, and

Whereas, the North Carolina Board of Pharmacy has had an increase in the number of hearings resulting from this activity, therefore

Be it resolved the Executive Committee of the North Carolina Pharmaceutical Association take appropriate action and recommend to the Board of Pharmacy that immediate action be taken to increase the penalty for these violations to include at least one-to-three years mandatory suspension of license or probation time in the case of a student, to

begin after the student is eligible to take the Board exams, and

Be it further resolved that the Board of Pharmacy publish the names of the offenders.

This resolution was written by the NCPHA Committee on Employer/Employee Relations, and endorsed by the NCPHA Executive Committee on Sunday, December 11, 1983.

David D. Claytor
President

SPRING UNC SCHOOL OF PHARMACY ALUMNI MEETING

The 1984 Spring Meeting of the UNC School of Pharmacy Alumni Association will be held Sunday, April 8, 1984, in conjunction with the 104th Annual Meeting of the North Carolina Pharmaceutical Association. The Alumni Meeting will be at the School of Pharmacy and will not conflict with the events scheduled for the Convention. Watch your mail for more details. See you in Chapel Hill in April.

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CORRESPONDENCE COURSE OTC Pediculicide (Anti-Louse) Products

By Thomas A. Gossel, R.Ph., Ph.D., Ohio Northern University Ada, OH
and J. Richard Wuest, R.Ph., Pharm.D., University of Cincinnati, Cincinnati, OH

Goals

The goals of this lesson are to:

1. Discuss the etiology and treatment of lice infestations.
2. Review the pharmacology of drugs used to treat lice infestations.

Objectives

At the completion of this lesson, the successful participant will be able to:

1. Properly advise consumers on the selection and technique for applying OTC agents for treating lice infestations.
2. Decide when the consumer should be referred to a physician when self-treatment is not appropriate.

Throughout the ages, historians have related that entire armies were devastated by the ravages of typhus and other diseases transmitted by the body louse. Napoleon was threatened by defeat, for example, more so than by Wellington's armies, because, at one time, several thousand French troops were infected by typhus carried by the body louse. It's interesting to speculate on how our lives might be changed today, if many of these early societies would have had effective antimicrobial agents to treat these once dreaded diseases. Thus, lice infestations, or more correctly, pediculosis, is a disorder that has bothered people of all classes, probably at all periods of history.

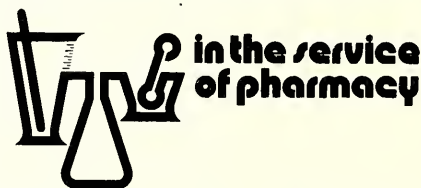
The term **pediculosis** describes a skin infestation of blood-sucking lice. Three varieties may infest humans: *Pediculus humanus capitis* (head louse), *Pediculus humanus corporis* (body louse, "cooties"), and *Phthirus pubis* (pubic or crab louse). A **pediculicide**, then, is a substance that kills lice, and replaces the older term, **parasiticide**, which is less descriptive of the largest insects it is intended to kill. Body lice infestations are now under control in this country, so outbreaks are rarely seen. Consequently, this month's lesson will concentrate on head and pubic lice, both of which are still rampant.

Incidence

There have been countless cases of head and pubic lice in the U.S. reported during recent years. Crab lice is the more common condition. However, when epidemics are reported, they are usually caused by head lice. Most outbreaks have appeared in the public schools at all grade levels, in institutions, and in places of close communal living. There are no accurate figures which describe the exact number of cases since pediculosis outbreaks do not have to be reported to any epidemiologic data collection center. Some data sources report that an excess of three million cases of lice appear in this country each year, but a more realistic estimate was given by a spokesperson for an OTC manufacturer of pediculicide products who recently stated that, based on sales of OTC pediculicide products, the number more closely approaches 6 to 7 million cases per year. One point that nearly everyone agrees with is that the number of cases is increasing each year.

Head lice occurs more often in females, although length of hair doesn't seem to be an important criterion. Boys with short hair are also affected. Blacks are infested much less frequently than whites. The occurrence of crab lice, on the other hand, shows no sexual preference, and blacks are affected as commonly as whites.

There appears to be no significant difference in incidence of pediculosis among the



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various socioeconomic groups. However, lice infestations do occur more frequently where unsanitary conditions prevail or there is a lack of correct personal hygiene.

The Medical Problem

Both the adult insect and nymph (stage of development immediately prior to adult) are **hematophagous** (blood sucking). During feeding, they introduce small quantities of saliva into their dinner area on the infested host. This causes an erythematous papule (small, reddened, raised and hard area) that appears within hours. These papules itch and as a result of vigorous, nearly constant scratching, secondary bacterial infections such as impetigo and boils may follow. Neither head nor crab lice transmit infections *per se*, although some reports occasionally state (erroneously!) that they do. (Body lice are transmitters of typhus, relapsing fever and trench fever, as stated earlier). However, there does seem to be a correlation between repeated attacks of crab lice and venereal disease (probably due to the person's enhanced sexual activity, rather than from the insect). This is why it is often recommended that persons with frequent bouts of crab lice be examined by a physician—to confirm or deny that this secondary condition exists.

After prolonged periods of scratching, microscopic examination of the affected area reveals infiltration with lymphocytes (white blood cells), and discharge of erythrocytes (red blood cells). The skin at these sites may eventually become pigmented because of deposition of iron, biliverdin or other blood components. The affected hair shaft becomes dry and lusterless. Later a pustular eczema (dermatitis) may appear.

Crab lice may cause an added condition known as **macules caeruleae**. These bluish-gray elevations in the skin do not itch, are not necessarily uncomfortable, and do not disappear when pressure is applied. They are believed to result from interaction of the insect's saliva with bilirubin from the host's blood, changing it to biliverdin.

Head and crab lice have **operculate** legs, which means the legs are capable of folding over as a lid to close around a hair shaft. This enables the insect to hold on. Once a person is infested, head lice usually attach themselves to hair on the head and crab lice

to hair on the pubic or perianal area. Head lice are most easily found on the nape of the neck or behind the ears. Crab lice are not always confined to pubic areas, and may actually establish residence on any hairy area of the body. All lice depend primarily on scratching and rubbing to transmit them from one part of the body to another, as they do not have the ability to move great distances by themselves. Contrary to popular belief, lice do not jump from one person to another.

Both forms attach themselves to hair shafts, about one-fourth inch from the skin. When hungry, they bite into the skin and feed on the victim's blood. Lice may remain attached by their mouth parts to the same site for several days, continually feeding. Crab lice seldom become engorged with blood; head lice do.

Pediculosis is a true parasitic disease, as lice depend on their human host for housing, feeding and reproduction. They cannot remain off their host for periods longer than 12 to 24 hours, although eggs can hatch anywhere, as long as the temperature is above 72°F. However, once hatched, the nymphs must have access to a human host within this 12 to 24-hour period if they are to survive.

An initial infestation is mild in most cases, reported at 8 to 10 lice per encounter. However, each female insect lays eggs (nits) at the rate of 3 to 10 per day, and lives 30 to 40 days. Thus, within several days of infestation, the initial number of lice has increased manyfold and the population will continue this upward climb unless the insect's life cycle is quickly interrupted.

Eggs are held in place on the hair shaft by a sticky cement-like secretion from the female louse. This bonding of an egg to the hair shaft is strong enough so that ordinary washing of the hair will not dislodge them. Nor will OTC pediculicide products dissolve the "cement". However, they will kill the nits.

Methods for Contamination. Head lice are most commonly spread by head to head contact with an infested person through contact between hats, scarves or clothing hung close together in school coat rooms, or by using communal combs and brushes. Bed

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OTC Pediculicides

linen or head rests of chairs and couches are another source of contact.

Crab lice are most frequently spread by sexual contact, by bedding, shared clothing and towels, and yes, even by toilet seats!

Is It Head or Crab Lice?

The first step in distinguishing between head and crab lice is to note the site of infestation. However, as stated above, crab lice are not always confined to the pubic or perianal areas. Since crab lice are usually contacted through sexual activity, it is especially important to identify the source and treat all sexual partners.

Both head and crab lice appear on the hair as tiny brownish-dark gray spots, approximately 1 to 2 mm long. If engorged with blood, head lice may appear reddish in color. Nits appear as yellowish or white spots.

Lice are undistinguishable by the naked eye, but can be differentiated by viewing under a strong magnifying glass. Head lice are elongated, flat insects. Their legs are short and have claws that can grasp skin, hair and fibers. Crab lice are shorter, broader and more rounded. Unlike head lice, they have lateral hairy processes (Figure 1).

Many pharmacists can relate stories about patients bringing in plastic vials with "something" inside that they think is lice. If the insects' features can be distinguished by the

unaided eye, they are not lice. If they are reported to "jump" from area to area, they are also not lice, and in fact, more likely are fleas.

If a lice infestation is suspected, either through questioning the patient, or by identification of the insect, an OTC pediculicide product can be safely and assuredly recommended. Both head and crab lice infestations are effectively treated with the same OTC products.

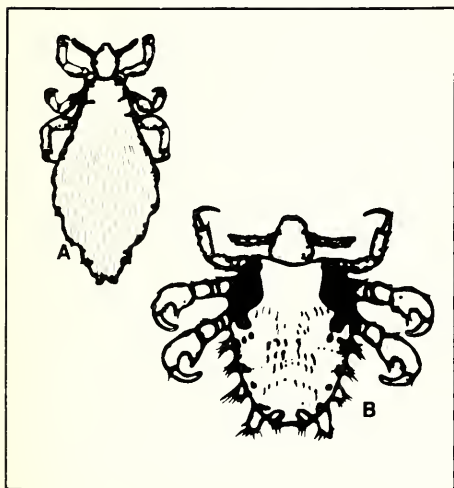
Treatment

Treatment of pediculosis is directed toward two goals: killing the lice and nits, and controlling symptoms. The most bothersome symptom is itching, which may be unrelenting. Secondary infection, when it occurs, constitutes the other symptom of concern.

Itching. Patients should be advised that even after the causative organisms and their nits have been killed, itching may persist for several days to a week or longer. This occurs because the insect's salivary secretion, which is deposited under the host's skin, incites release of histamine and perhaps other inflammatory substances. After the insect's death, time is required for the saliva droplets to be absorbed and destroyed by the host, and for localized inflammation to subside.

Such advice is necessary because a normal patient's response to continued itching would be to repeatedly apply a pediculicide product, thinking the former application was ineffective. Excessive use of these products subjects the patient to increased risk of needless side effects, including excessive drying of skin which may cause further itching. Any of the medications or procedures for controlling itching that were discussed in the previous two lessons are appropriate measures for itching caused by lice. Secondary bacterial infections may be treated by use of an appropriate topical antibiotic remedy (discussed in next month's lesson). Such infections occur rarely. When they fail to heal within seven days or worsen with continued therapy, a physician should be consulted.

Home Remedies. Because of the social stigma attached to lice infestations, a number of home remedies and self-treatment regimens have originated. For example, the head



(continued on page 24)

OTC Pediculicides

and/or pubic areas can be shaved to eliminate lice, but this is not necessary. The area can be heated with a hair dryer until the skin tingles. Or the head can be soaked in hot water for 3 minutes to kill head lice and their nits. These measures can be uncomfortable to the human and are unlikely to be effective for all insects and eggs. Because of the rapid rate of louse reproduction, after a day or so, the patient is back to square one.

One older procedure is to soak the scalp or affected area with kerosene or gasoline. This is a potentially lethal procedure and must not be advocated. Sufficient petroleum distillate may be absorbed to cause fatal poisoning. At the very least, these substances will dry the skin to greatly intensify the itching.

Current Status of OTC Pediculicide Products

The FDA-OTC Advisory Review Panel on Miscellaneous External Drug Products has finalized its study of pediculicidal products and published its report. It still remains as an "Advance Notice of Proposed Rulemaking" as FDA has not yet ruled on the panel's findings. If accepted, some OTC pediculicide products will have to undergo change because they do not contain acceptable medications. Most others on the market already meet the standards. More importantly, pharmacists will then be assured that the OTC products they recommend are both safe and effective for eradicating head and pubic lice infestations.

Products containing pyrethrins in combination with piperonyl butoxide (pyrethrins 0.17 to 0.33%; piperonyl butoxide 2 to 4% in a non-aerosol dosage formulation) were listed by the advisory panel as safe and effective for OTC use in controlling head and pubic lice. The panel reviewed available data on a variety of other ingredients (Table 1), but dismissed all but one of them from further considerations because they had insufficient evidence to demonstrate their safety and effectiveness. The panel did not consider lindane since it believed (and most experts concur) that lindane (gamma benzene hexachloride-Kwell*) should only be used with proper medical supervision. Malathion (Prioderm*) is another pediculide in the prescription-only, (i.e., effective but not safe for self medication) category.

Pyrethrins with Piperonyl Butoxide.

Piperonyl butoxide is one of a few true pharmacological synergists. It potentiates the insecticidal activity of pyrethrins (as well as many other environmental insecticides). A synergist is defined as a substance which potentiates the effect of another agent, by acting through a different biological mechanism, to bring about an effect that is greater than merely additive. The former enhances pyrethrins' pediculicide effect by suppressing the insect's oxidative degradation mechanisms which inhibit its ability to metabolize and, hence, destroy pyrethrins. Thus, the contact time (and consequently, the kill rate) of pyrethrins on the insect is increased. Pyrethrins kill the insects by disrupting their ion transport mechanisms at nerve membranes, in a manner perhaps best clinically correlated to a massive systemic overdose of local anesthetic with its toxic consequences. The insects die of convulsions and paralysis.

Pyrethrins are rapidly acting insecticides. Commercial preparations consist of a mixture of substances obtained from the flowers

TABLE 1
**Ingredients Reviewed by FDA's OTC
Advisory Panel**

-
- | | |
|-------------------------|--------------------------------|
| 1. Active Ingredients | |
| | Piperonyl butoxide* |
| | Pyrethrins* |
| | Isobornyl thiocyanacetate** |
| 2. Inactive Ingredients | |
| | Deodorized kerosene |
| | Petroleum distillate |
| 3. Other Ingredients | |
| | Alkaloids of sabadilla |
| | Aqueous coconut oil soap |
| | Benzocaine |
| | Benzyl alcohol |
| | Benzyl benzoate |
| | Copper oleate |
| | Dichlorodiphenyl |
| | trichloroethane (DDT) |
| | Diocetyl sodium sulfosuccinate |
| | (Docusate*) |
| | Picrotoxin |
| | Propylene glycol |
| | Sublimed sulfur |
| | Thiocyanacetate |
-

of a chrysanthemum plant. Hense, the term "pyrethrins" actually refers to several substances, identified chemically as esters of two acids (chrysanthemic acid and pyrethrolone, cinerolone, and jasmolone). Much of the commercial pyrethrins are obtained from plants grown in Tanzania and Kenya.

Numerous *in vitro* studies have repeatedly shown that pyrethrin products are effective pediculicides when used in concentrations up to 0.33% (in combination with piperonyl butoxide up to 4%). An insect kill rate of 97 to 100% at 10 minutes exposure can be demonstrated. The questions that many pharmacists raise are, "Will this combination stand up to clinical trials and treat human infestations," and if so, "How effective is it compared to lindane?"

To answer these questions, several studies were designed to compare pyrethrins, 0.3%, in combination with piperonyl butoxide, 3.9%, to lindane lotion or shampoo product containing lindane treatments at weekly intervals. When examined immediately after the third application, all individuals in the pyrethrin group were free of lice and viable nits, while one individual in the lindane group still remained infested.

Subjects with crab lice received a single application of pyrethrins with piperonyl butoxide, lindane lotion, or lindane shampoo. One week after treatment, all were carefully examined for lice. No lice or viable nits were found on any patient, regardless of his treatment.

The advisory panel recommended to FDA that a second application of the product after one week was appropriate. It pointed out that while pyrethrins with piperonyl butoxide is an effective pediculicide combination, there is little evidence that the combination is completely effective in eradicating all viable forms of lice (adults, nymphs and eggs) with a single application. Since unaffected eggs normally hatch into their nymph stage within 7 to 10 days, reapplying the product 7 to 10 days after the initial treatment should increase its effectiveness.

The safety of any OTC product should be a primary concern to the pharmacist and patient. Neither pyrethrins nor piperonyl butoxide are extensively absorbed following cutaneous application. What is absorbed is rapidly metabolized, and the estimated human le-

thal doses are (pyrethrins) 0.7 gm/kg and (piperonyl butoxide) 11.5 gm/kg. Most clinical reports describing toxicity with OTC pediculicidal products containing pyrethrins and piperonyl butoxide refer to the problems due to other ingredients such as petroleum solvents in the preparation. One or more teaspoonfuls of such a product could be a potentially fatal dose for a child. When the products are used as intended (externally), their toxicity is minimal.

Side effects to either agent are uncommon. Contact dermatitis is the most frequently reported condition. Since pyrethrins are obtained from natural plant origin, allergic rhinitis and asthma attacks may be precipitated in susceptible individuals. When pyrethrins are inhaled, some persons may develop nausea and vomiting, which on rare occasion, can lead to muscle paralysis and even death. In most instances, cutaneous irritation and itching usually disappear within minutes.

The current literature contains conflicting reports regarding the potential of pyrethrins to cause allergic responses. The advisory panel stated that there is no standardized procedure for extracting pyrethrins from their natural sources. Therefore, the allergenic component(s) may be present in one batch but not in another. Nevertheless, the chance for an allergic reaction in a susceptible person is great enough that the panel recommended placing the warning: "use with caution on persons allergic to ragweed" on all pyrethrin preparations. Pharmacists should make sure that all purchasers of these products heed this statement.

Manufacturers may indicate that their products are for treatment of head, pubic (crab), and body lice. The panel cited two other claims that cannot be made. In the first instance, no inference should be made that the product is ovicidal (capable of killing the eggs). The ovicidal effectiveness of these products is variously reported in the literature at 20 to 34% of nits killed, even though the panel recognized that the products, in actual clinical use, do have a high nit kill rate. In its opinion, current data do not support clinical claims that the products are ovicidal. Should such studies be undertaken and their results show a more positive ovicidal action, this indication could become permissible.

Secondly, no claim can currently be made

(continued on page 27)

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OTC Pediculicides

that the product should be reapplied sooner than seven days. The reasoning behind this notice is that unaffected eggs usually hatch in 7 to 10 days, so any re-application prior to 7 days will not have maximum value.

Isobornyl Thiocynoacetate. This ingredient has long been used as an OTC pediculicide for head, crab and body lice. However, the panel placed it in Category II (ineffective and/or unsafe) because of insufficient data demonstrating either safety or effectiveness. Until FDA rules on this recommendation, products containing isobornyl thiocynoacetate (e.g., Thanite®) may continue to be sold.

TABLE 2

**OTC Pediculicides containing
Pyrethrins and Piperonyl Butoxide
Which Meet the FDA Advisory Panel's
Standards of Safety and Efficacy**

Liquids:	A-200 Pyrinat [®] Barc [®] Pyrinyl [®] Rid [®] Tisit [®]
Gels:	A-200 Pyrinat [®] Blue Gel [®] Tisit Blue [®]
Shampoos:	R & C [®] Rid [®] Triple X [®]

Conclusions. At this time, there is no guarantee that the advisory panel's recommendations will be accepted by FDA, exactly as they are written. As is always the case, FDA's final rule will be published after public comment on the panel's report has been reviewed. If the panel's recommendations are accepted, then only those products containing a pyrethrin-piperonyl butoxide combination at concentrations of 0.17 to 0.33% pyrethrins and 2 to 4% piperonyl butoxide will be permitted to be sold as OTC pediculicides. One can expect to see a proliferation of new products, and nearly all of the previously non-complying ones have been reformulated to conform to the new standards. An interesting example of this is the product

Barc® (this is "crab" spelled backwards). When the panel's report was published, its manufacturer reformulated it from isobornyl thiocynoacetate to pyrethrins plus piperonyl butoxide. Table 2 lists the currently marketed products that meet the review panel's recommendations.

TABLE 3

**Adjunctive Methods for Controlling
Lice Infestations**

1. *Washable material items:* machine wash in hot water (130°F) and dry; use hot cycle of dryer for at least 20 minutes.
2. *Nonwashable material goods:* dry clean or seal in plastic bag for 2 to 3 weeks.
3. *Personal items* (comb, brushes, etc.): soak in hot water (130°F) for 5 to 10 minutes.
4. *Carpets, chairs, couches, etc.:* Vacuum thoroughly. OTC spray products are no more effective in removing the risk of reinfestation than thorough vacuuming.

Adjunctive Therapy

OTC pediculicide products definitely kill the insects and probably kill their eggs. However, they do not dissolve the cement which holds the nits onto hair shafts, nor dislodge nits from their point of attachment. This point should be told to all consumers purchasing an OTC pediculicide. Like the residual itching that persists after the product has worked, the presence of remaining nits (albeit dead) may signal the consumer to needlessly re-apply the medication.

Therefore, nits must be manually removed by combing with a fine-tooth comb. Alternatively, white vinegar diluted in half with water, or rubbing alcohol used full strength or diluted, may be applied and left in place for several minutes to dissolve the cement; then it may be removed by thorough shampooing. As a last resort, the patient can play "professor" and "nit-pick" them off, one-by-one! Patients should be advised not to confuse hair spray globules, hair casts, dandruff, or other extraneous debris with nits.

(continued on page 28)

OTC Pediculicides

Equally important to killing all insects and eggs on the host, is eliminating them from clothing and other items that the infested person has come into contact with. The advice listed in Table 3 should be heeded.

Summary

The pharmacist should actively counsel each consumer purchasing an OTC pediculicide product. The products will only work if used correctly; and when used properly, they are not only effective, but also safe. When lice are discovered on one individual in a family, the other family members should also receive treatment unless it is absolutely sure that they have not been exposed. All personal items and areas of the home which may have been contaminated must be de-contaminated (i.e., Table 3) if treatment is to be completely effective.

CORRESPONDENCE COURSE QUIZ

Lice Infestation

1. Which of the various types of lice transmit infections?
 - a. Body lice
 - b. Crab lice
 - c. Head lice
2. Under magnification, head lice can be differentiated from crab lice in which of the following ways?
 - a. Head lice have lateral hairy processes while crab lice do not.
 - b. Head lice are able to fly while crab lice cannot.
 - c. Head lice are more elongated and flat while crab lice are shorter and round.
 - d. None of the above, the two are indistinguishable from each other.
3. Lindane is another name for:
 - a. Benzoyl benzoate
 - b. Gamma benzene hexachloride
 - c. Hexachlorophene
 - d. Piperonyl butoxide
4. Consumers obtaining an OTC pediculicide should be given which of the following pieces of advice?
 - a. To be truly effective, the head or pubic area should be shaved.
 - b. The product should be applied daily for at least 7 to 10 days after symptoms have cleared up.
 - c. After applying the product, use a hair dryer to kill the nits.
 - d. Itching may continue even though the lice and nits have been killed.
5. Which of the following pediculicides was ruled to be safe and effective by an FDA advisory panel for OTC use?
 - a. Lindane with pyrethrins
 - b. Malathion with piperonyl butoxide
 - c. Pyrethrins with piperonyl butoxide
 - d. Malathion with pyrethrins
6. The most commonly encountered side effect of OTC pediculicides is:
 - a. Contact dermatitis
 - b. Nausea and vomiting
 - c. Photosensitivity
 - d. Secondary infections
7. All of the following statements are true **EXCEPT**:
 - a. Body lice is a rarer type of infestation than head lice in this country.
 - b. The reoccurrence of crab lice shows less of a sexual preference for human hosts than do head lice.
 - c. The initial erythematous papules that occur with lice infestations are due to louse-secreted saliva.
 - d. Only the adult forms of lice are blood sucking.
8. The optimal time regimen for applying OTC pediculides is:
 - a. An initial dose followed by a second application in seven days.
 - b. An initial dose followed by a second application in fourteen days.
 - c. Daily application for seven days.
 - d. Daily application for fourteen days.
9. The product that once contained isobornyl thiocynoacetate but was reformulated to meet the OTC advisory panel's recommendation for pediculicides is:
 - a. A-200 Pyrinat®
 - b. Barc®
 - c. Kwell®
 - d. Rid®
10. Which of the following statements is true?
 - a. Lice eggs are held in place with saliva secreted by the female insect.
 - b. Most OTC pediculicides will dissolve the substance that holds nits in place.

- c. Female lice lay a total of 3 to 10 eggs and then die.
 - d. Crab lice can be spread by contact with either an infested person or an inanimate object.
11. Commercially available pyrethrins are obtained from the flowers of:
- a. Chrysanthemum
 - b. Poinsettia
 - c. Pyrebutus
 - d. Rhododendron
12. Safe and effective OTC pediculicides act by:
- a. Directly depressing cellular respiration.
 - b. Preventing absorption of needed nutrients.
 - c. Disrupting ion transport mechanisms.
 - d. Smothering the lice.
13. All of the following statements are true **EXCEPT**:
- a. Lice cannot survive off their host for periods longer than 12 to 24 hours.
 - b. Lice eggs can hatch anywhere but once hatched, the nymphs must have access to a human host with 12 to 24 hours.
 - c. Lice attach themselves to hair shafts about ¼ inch from the skin and feed off the host's blood.
 - d. Lice are able to move to any part of the body by using their operculate (crawling) legs.
14. The best way to remove nits from the hair is to:
- a. Apply an OTC pediculicide.
 - b. Blow dry the hair until the nits fall off.
 - c. Comb the hair with a fine-tooth comb.
 - d. Soak the hair in kerosene for 5 minutes.
15. The term *macules caeruleae* refers to:
- a. A pustular eczema.
 - b. Blue-gray elevations on the skin.
 - c. An excessive impulse to itch.
 - d. Secondary infections in louse-created wounds.

This Continuing Education article is approved for one (1) hour C. E. credit. A score of 90% is required for C. E. credit. The test may be repeated only once. Please mail in your answers to the NCPHA, P.O. Box 151, Chapel Hill, NC 27514. Records will be kept for you at the NCPHA office. There is no charge for NCPHA members.

CONVENTION HIGHLIGHT

DON'T MISS THE SEMINAR ON OTC COUNSELING FOR SUMMER AILMENTS, PRESENTED TUESDAY MORNING, APRIL 10, AT THE ANNUAL CONVENTION OF THE NORTH CAROLINA PHARMACEUTICAL ASSOCIATION. Drs. Gossel and Wuest are sponsored by Merrell Dow Pharmaceuticals, Inc.

CON GAME REPORTED IN THE PALMETTO PHARMACIST

The telephone rings in your pharmacy, the voice on the other end says he is Officer X in the local police department or with the SBI, and is working on a prescription forgery case. A suspected forger is coming to your pharmacy with a bogus Dilaudid prescription and he wants you to fill the prescription so the forger can be arrested leaving the store. You fill the prescription for 50 Dilaudid 4 mg. and wait for the arrest. And wait and wait. Be aware the drug culture is devious and be suspicious of unusual attempts to obtain controlled substances. Keep the telephone numbers of local law enforcement agencies handy and call if you are the least bit unsure. Help keep legal drugs out of illegal channels.

CONGRATULATIONS TO

William H. Edmondson, director of government affairs for Burroughs Wellcome Co., who has been named chairman of the Florida Health Care Information Council, a non-profit organization aimed at educating the public about health care.

DEA REGISTRATION FEE INCREASES

Effective June 1, 1984, all new applications for DEA registration, and July 1 all renewal applications will cost \$20.00, for hospital and retail pharmacies, and practitioners. This is a dramatic increase from the current \$5.00 registration fee and is the first increase since 1971.



The Dixie Sunrise Breakfast participants at the National Association of Retail Druggists' Convention in Las Vegas. From left to right: LaMar Creasman, North Wilkesboro, Dot and Jesse Pike, Concord; Joe Mosso, Latrobe, Pa, NARD Second Vice President; Beebe and Ernest Rabil, Winston-Salem; Daphne and Ralph Ashworth, Cary; and Betsy and Al Mebane, Chapel Hill. Photo courtesy of Geigy.

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1984 EDITION OF USP DI PUBLISHED

A newly revised and expanded edition of *USP DI* is now available from USP. *USP DI* is a comprehensive, continuously updated reference of drug-use information for the health professional and the patient. Published in a convenient two-volume format, the 1984 edition is 20% larger than the 1983 edition because of the increase in the number of drugs covered, and an expansion of the information in each monograph. *USP DI* now contains information on practically all drugs available in the United States, including such newly approved drugs as ranitidine, diltiazem, and guanadrel.

As is expected from USP, the 1984 *USP DI* is the result of an elaborate drug information system designed to provide a common data base of unbiased and current drug use information for those who prescribe, dispense, administer, or use drugs. When first released in 1980, *USP DI* gained widespread attention as a landmark in drug information—a source book containing both a practitioner and a lay-language patient section—representing the consensus of hundreds of experts.

The 1984 *USP DI* soft cover, two-volume set covers most prescription and non-prescription medications. Volume I, *Drug Information for the Health Care Provider*, is specifically written for the health professional. Volume II, *Advice for the Patient*, presents corresponding information in lay language for the consumer. Each volume contains over 500 individual monographs contained in each volume, nearly 80 of which are family groupings covering an additional 500 agents or combinations. Over 4500 drug dosage forms and brands (including Canadian) are represented.

New in 1984

Changes that have been incorporated into the 1984 edition of *USP DI* include:

- placement of brand names in both Volume I and Volume II monographs, as well as in the indexes;
- complete revision of category-of-use terminology;
- special identification of unlabeled uses in the category and indications sections;

—inclusion of an expanded indications section;

—addition of specific precautions sections on carcinogenicity, mutagenicity, and/or tumorigenicity;

—addition of precautions relating to pediatric and geriatric use;

—expansion of pregnancy and breast-feeding precautions sections;

—inclusion of signs and treatment of overdose;

—inclusion of a dosage form preparation section; and

—addition of an incompatibilities section.

Extensive Use of USP DI Data Base

USP DI has been selected as the data base for the patient education leaflet programs of the American Medical Association, the National Association of Retail Druggists, the Canadian Pharmaceutical Association, and the state pharmacy associations in Louisiana, Missouri, Montana, Pennsylvania, and Washington. *USP DI* is also the basis of the Drug Use Education Tips (DUET) program of the American Academy of Family Physicians.

The USP DI System

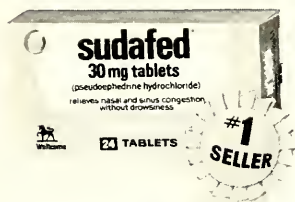
The USP DI System provides a coordinated approach to patient drug-use information. Elements of the System include *About Your Medicines*, a consumer-oriented home reference book of the most widely used prescription and non prescription drugs covered in *Advice for the Patient*; English and Spanish brochures about specific drug families and general drug use; English and Spanish patient drug education leaflets; English and Spanish patient education posters; and a bimonthly, consumer-oriented newsletter.

The 1984 *USP DI* is available from the North Carolina Pharmaceutical Association for \$44.95 for the two-volume set. Copies of each volume are also available separately (Volume I, *Drug Information for the Health Care Provider*, \$29.95; Volume II, *Advice for the Patient*, \$21.95.) Subscriptions to the bimonthly *USP DI Update*, which supplements both volumes, are \$9.00 for one year. Copies may be ordered from the NCPHA, P. O. Box 151, Chapel Hill, NC 27514.

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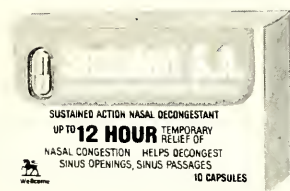
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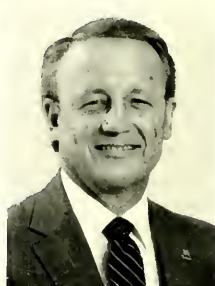
Research Triangle Park, NC—Burroughs Wellcome Co. announces the appointment of two vice presidents at its corporate headquarters in Research Triangle Park, NC.

Jack Munroe has been named vice president of sales. Before this appointment, Munroe was director of sales for Burroughs Wellcome. He joined the company as a sales representative in 1960 and has served as national sales manager, general sales manager and sales promotion and training manager. Munroe is a graduate of Tennessee Polytechnic. He received a B.S. in biology and has completed the Harvard Professional Management Program. He is a resident of Raleigh, NC.

J. Douglas Reiff Jr. has been named vice president of product marketing. Previously, he was director of product marketing. Reiff joined the company in 1964 and has served as marketing services manager, acting general manager of the Wellcome Animal Health Division in Kansas City and acting marketing director. Reiff was graduated from Florida State University with a B.S. in industrial marketing. He is a resident of Raleigh, NC.



Jack Munroe



J. Douglas Reiff, Jr.



MEDICAID

TOTAL VENDOR PAYMENTS AND TOTAL ELIGIBLES BY COUNTY For State Fiscal Year July 1, 1981-June 30, 1982

County Name	1981 Est. County Population	Number of Medicaid Eligibles	Total Expenditure	Per Capita Expenditure Amount	Ranking	Eligibles Per 1,000 Population
Alamance.....	99,668	4,657	\$ 6,456,054	64.77	88	46
Alexander	25,543	976	1,848,145	72.35	78	38
Alleghany	9,724	506	412,565	42.42	100	52
Anson	25,601	2,412	3,232,514	126.26	6	94
Ashe	22,730	1,404	1,633,081	71.84	79	61
Avery	14,786	853	1,316,546	89.04	46	57
Beaufort	41,385	3,137	3,478,430	84.05	53	75
Bertie	21,221	2,511	2,698,662	127.16	4	118
Bladen	30,749	3,778	3,484,336	113.31	18	122
Brunswick	37,220	2,810	2,792,314	75.02	72	75
Buncombe	161,749	7,174	12,692,621	78.47	66	44
Burke	73,280	3,330	5,422,338	73.99	74	45
Cabarrus	87,851	4,024	6,262,994	71.29	80	45
Caldwell	68,162	2,455	4,524,963	66.38	87	36
Camden	5,679	463	483,200	85.08	50	81
Carteret	42,901	2,401	3,328,295	77.58	68	55
Caswell	21,009	2,106	1,941,730	92.42	42	100
Catawba	106,746	4,708	7,277,434	68.17	83	44
Chatham	34,002	1,672	2,509,619	73.80	75	49
Cherokee	19,218	1,006	1,827,588	95.09	36	52
Chowan	12,638	1,074	1,535,568	121.50	11	84
Clay	6,957	388	855,922	123.03	8	55
Cleveland	83,837	6,884	6,923,610	82.58	54	82
Columbus	51,952	5,671	5,947,666	114.48	16	109
Craven	71,832	5,628	5,457,238	75.97	69	78
Cumberland	251,138	21,090	15,293,395	60.89	93	83
Currituck	11,310	567	858,737	75.92	70	50
Dare	14,461	423	681,683	47.13	97	29
Davidson	113,661	5,384	7,665,968	67.44	85	47
Davie	26,532	1,107	1,950,825	73.52	77	41
Duplin	40,854	3,981	4,478,445	109.62	21	97
Durham	154,783	12,479	15,494,640	100.10	31	80
Edgecombe	56,125	8,321	6,901,013	122.95	9	148
Forsyth	246,863	16,951	19,715,072	79.86	62	68
Franklin	30,540	3,162	3,543,732	116.03	15	103
Gaston	164,222	10,946	13,031,585	79.35	63	66
Gates	8,970	852	1,099,982	122.62	10	94
Graham	7,052	560	629,253	89.23	45	79
Granville	34,554	2,388	2,595,188	75.10	71	69
Greene	16,078	1,896	1,750,996	108.90	22	117
Guilford	317,913	22,520	26,868,210	84.51	52	70
Halifax	55,432	10,432	6,721,519	121.25	12	188
Harnett	60,355	5,677	6,259,625	103.71	28	94

(continued on page 34)

County Name	1981 Est. County Population	Number of Medicaid Eligibles	Total Expenditure	Per Capita Expenditure Amount Ranking		Eligibles Per 1,000 Population
Haywood	46,915	2,380	3,748,734	79.90	61	50
Henderson	60,606	2,449	4,102,346	67.68	84	40
Hertford	23,513	2,917	2,953,787	125.62	7	124
Hoke	21,202	2,483	1,978,413	93.31	40	117
Hyde	6,000	562	606,545	101.09	30	93
Iredell	84,157	4,478	6,255,370	74.32	73	53
Jackson	26,460	1,208	1,594,117	60.24	94	45
Johnston	71,841	5,256	7,059,478	98.26	32	73
Jones	9,707	1,218	1,286,031	132.48	3	125
Lee	37,090	2,782	\$ 3,221,583	86.85	48	75
Lenoir	60,004	5,934	7,161,510	119.35	13	98
Lincoln	42,909	1,858	2,852,640	66.48	86	43
Macon	21,204	627	959,809	45.26	98	29
Madison	17,522	1,614	1,986,673	113.38	17	92
Martin	26,356	2,272	2,501,649	94.91	37	86
McDowell	35,867	1,790	2,839,720	79.17	64	49
Mecklenburg	411,641	28,404	29,022,298	70.50	81	69
Mitchell	14,515	994	1,370,841	94.44	38	68
Montgomery	22,704	1,718	2,077,609	91.50	43	75
Moore	51,288	3,110	4,015,440	78.29	67	60
Nash	68,385	6,927	6,511,338	95.21	35	101
New Hanover	105,591	8,903	8,616,285	81.60	56	84
Northampton	22,494	3,979	3,419,749	152.02	1	176
Onslow	113,448	4,245	5,373,302	47.36	96	37
Orange	77,451	2,530	3,409,779	44.02	99	32
Pamlico	10,433	950	1,164,174	111.58	19	91
Pasquotank	28,428	2,353	2,941,135	103.45	29	82
Pender	22,511	2,157	1,827,558	81.18	57	95
Perquimans	9,618	875	1,015,383	105.57	26	90
Person	29,484	2,564	3,283,904	111.37	20	86
Pitt	92,126	9,804	8,515,668	92.43	41	106
Polk	13,416	491	1,080,456	80.53	59	36
Randolph	93,071	2,677	5,689,452	61.13	91	28
Richmond	45,853	3,062	4,122,464	89.90	44	66
Robeson	102,889	14,932	10,762,333	104.60	27	145
Rockingham	84,637	5,432	6,840,480	80.82	58	64
Rowan	100,231	4,375	6,169,859	61.55	90	43
Rutherford	54,541	3,535	4,308,663	78.99	65	64
Sampson	49,865	4,233	5,314,080	106.56	25	84
Scotland	32,559	4,876	3,797,063	116.62	14	149
Stanley	48,238	2,288	3,551,427	73.62	76	47
Stokes	34,054	1,511	2,350,236	69.01	82	44
Surry	59,885	3,015	4,788,294	79.95	60	50
Swain	10,360	876	976,169	94.22	39	84
Transylvania	23,869	1,178	1,970,804	82.56	55	48
Tyrrell	4,133	590	443,443	107.29	23	142
Union	72,070	3,982	4,405,894	61.13	92	55
Vance	36,803	4,856	3,947,831	107.26	24	131
Wake	307,705	16,420	19,848,943	64.50	89	53
Warren	16,256	2,668	2,308,363	142.00	2	164
Washington	14,692	1,645	1,243,929	84.66	51	111

County Name	1981 Est. County Population	Number of Medicaid Eligibles	Total Expenditure	Per Capita Expenditure Amount	Ranking	Eligibles Per 1,000 Population
Watauga.....	32,668	1,262	1,774,271	54.31	95	38
Wayne.....	97,449	9,062	9,339,790	95.84	34	92
Wilkes.....	59,193	2,752	5,177,448	87.46	47	46
Wilson.....	63,285	7,085	6,165,828	97.42	33	111
Yadkin.....	29,020	1,340	2,483,187	85.56	49	46
Yancey.....	15,010	985	1,908,312	127.13	5	65
STATE TOTAL.....	5,960,505	425,233	\$484,325,188	81.25	NA	71

Source: Division of Medical Assistance Medicaid Cost Calculation



Edward L. Smithwick

Edward L. Smithwick, Jr., Ph.D., has been named director of biosynthetic development and technical services by Eli Lilly and Company. He had served as manager of bio-synthetic development, technical services, and quality control since May 1982.

A native of North Carolina, Dr. Smithwick was graduated from high school in Morehead City in 1956. He attended the University of North Carolina, receiving a Bachelor of Science degree in pharmacy in 1960 and his Doctor of Philosophy degree in organic chemistry in 1966. He is registered as a *pharmacist in North Carolina*.

Dr. Smithwick joined the company in 1967 as a senior organic chemist. His research interests were in the area of peptide synthesis. He was named a research scientist in 1973, became head of biochemistry in 1977, and was named head of process research and development in 1981.

He is a member of the American Chemical Society and New York Academy of Sciences.

RESOLUTIONS

Any NCPHA member may submit a resolution for consideration at the Annual Meeting to be held April 8, 9 In 3 10, 1984 in Chapel

Hill. The resolution does not have to be in final form but should be typewritten and sent to the NCPHA office in Chapel Hill or the chairman of the Resolutions Committee, Robert J. Allen, NC Division of Mental Health, 325 N. Salisbury Street, Raleigh 27611.

WAYNE COUNTY PHARMACEUTICAL SOCIETY

1984 Officers for the Wayne County Pharmaceutical Society were installed Sunday night, January 15, by NCPHA Executive Director Al Mebane at a dinner meeting of the Society at the Goldsboro Country Club. Officers are:

President—M. Keith Stewart, Fremont
 Vice President—Johnnie H. Casey, Goldsboro
 Secretary-Treasurer—William T. Kesler, Goldsboro
 Program Co-Chairmen—John L. Hinson, Jr., Goldsboro
 J. Richard Sessions, Goldsboro

A Plaque of Appreciation was presented to Immediate Past President Julian C. (Buzz) Baker by Hugh Clark on behalf of the Society.

FIFTY-PLUS CANDIDATES

The 50+ Club of the North Carolina Pharmaceutical Association is for those pharmacists who have been licensed fifty years or more, either in North Carolina or another state. Candidates for induction this year were first licensed in 1934. If you qualify or know a NCPHA member who does, please notify the NCPHA Central Office in Chapel Hill so a certificate and lapel pin can be prepared and presented at the Convention in April.

CLASSIFIED ADVERTISING

Classified advertising (single issue insertion) 10 cents a word with a minimum charge of \$3.00 per insertion. Payment to accompany order.

Names and addresses will be published unless a box number is requested.

In replying to "blind" ads, address Ad. No., Carolina Journal of Pharmacy, P. O. Box 151, Chapel Hill, N. C. 27514. Telephone (919) 967-2237

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For independent pharmacy. No nights or Sundays. Send Resume to Wayne Avery, PO Box 2505, Wilson, NC 27893.

PHARMACIST AVAILABLE

Retail and hospital experience. Will locate in any section of the state. Contact: William Savage, 410A Eastbrook Apt., Greenville, NC 27841. Call 919-758-0826 or 919-537-4376.

PHARMACIST AVAILABLE

Nights and weekends. Whole month of May, June. Will work within a 1-1/2 radius of Chapel Hill area or Eden area. Contact Shannon Huff. (919) 933-9446 after 6:00.

HOSPITAL PHARMACIST

Part time Granville Hospital, Oxford, NC has an opening for a part time staff pharmacist. Unit dose experience preferred. Contact Joe O. Earnhardt, Director of Pharmacy Services, Granville Hsp., College Street Extension, Oxford, NC 27565. 919-693-5115.

PHARMACIST NEEDED

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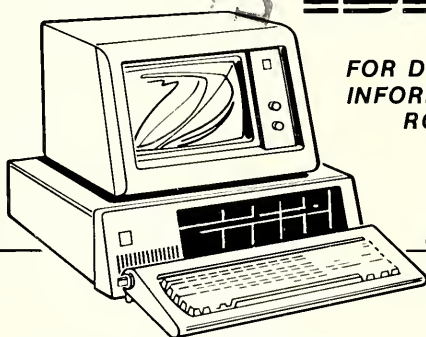
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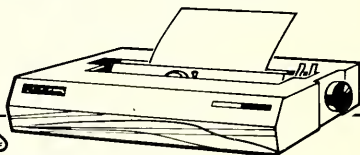


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OLINA JOURNAL of PHARMACY

CONVENTION ISSUE

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MAR 29 1984



THE HOTEL EUROPA, CHAPEL HILL
HEADQUARTERS FOR THE 104TH ANNUAL MEETING
April 8, 9 and 10, 1984

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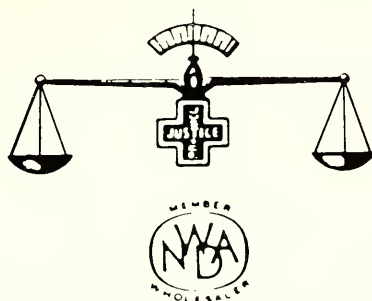
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THE CAROLINA JOURNAL of PHARMACY

(USPS 091-280)

FEBRUARY 1984

VOLUME 64

NUMBER 2

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**North Carolina Pharmaceutical Association
Officers to be installed April 10, 1984**

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Henry L. Smith, Carrboro



General Co-Chairmen, Bill and Marilyn Edmondson

**104TH ANNUAL CONVENTION
NORTH CAROLINA PHARMACEUTICAL ASSOCIATION
And Affiliated Auxiliaries
Schedule of Events**

**HOTEL EUROPA
CHAPEL HILL, NORTH CAROLINA
April 8, 9, & 10, 1984**

SUNDAY, APRIL 8

- 10:00 a.m. UNC School of Pharmacy Spring Alumni Meeting—Beard Hall
1:00 p.m. REGISTRATION DESK OPENS—Lobby Lounge
Woman's Auxiliary Hospitality Room Opens
2:00 p.m. NC PharmPAC Meeting (Open to the Public)—Europa C
Kappa Epsilon Spring Alumnae Meeting—Paris Room
4:00 p.m. Awards Session—Europa C
5:00 p.m. President's Reception—Europa Terrace
Sponsored by Glaxo, Inc.
7:30 p.m. *"Dinner on the Hill"—Opening Session—Europa Ballroom

MONDAY, APRIL 9

- 8:00 a.m. REGISTRATION DESK OPENS—Lobby Lounge
TMA Foundation Breakfast
9:00 a.m. NCPHA First Business Session—Europa B & C
9:30 a.m. Woman's Auxiliary Tour of Burroughs Wellcome Co. (Buses begin Loading)
12:30 p.m. Woman's Auxiliary Luncheon—Governor's Inn
Sponsored by Burrough's Wellcome Co.

MONDAY AFTERNOON

- Owens-Illinois Golf Tournament—Chapel Hill Country Club
Pilot Life Tennis Tournament—Ephesus Church Road Courts
2:00 to 5:00 p.m. **WORKSHOPS**
A. Preventing Burnout and Stress—Fred M. Eckel—Europa A
B. Effective Interviewing—Jan Tanner, Burroughs-Wellcome Co.—Europa B
C. Consulting Pharmacy in Long Term Care—Panel Discussion—Europa C
7:00 to 8:00 Social Hour—NC Drug Wholesalers Wine and Cheese Party
Vienna-Brussels Rooms

TUESDAY, APRIL 10

- 8:00 a.m. REGISTRATION DESK OPENS—Lobby Lounge
9:00 a.m. NCPHA Second Business Session—Europa B & C
Woman's Auxiliary Coffee—Europa A
9:30 a.m. Woman's Auxiliary Business Session—Europa A
11:00 a.m. Traveling Members' Auxiliary Business Session—Brussels Room
11:30 a.m. Woman's Auxiliary Luncheon, Fashion Show and Tour—Morehead House
2:00 p.m. NCPHA Third Business Session—Europa B & C
3:00 p.m. Woman's Auxiliary Tea—UNC President and Mrs. William Friday's
Home, 402 W. Franklin Street
7:00 p.m. *Installation Dinner—Europa Ballroom
9:00 p.m. TMA Sponsored Dance—Europa Ballroom

*Reservations available from the NCPHA office or registration desk.

104TH ANNUAL CONVENTION NORTH CAROLINA PHARMACEUTICAL ASSOCIATION OFFICERS AND EXECUTIVE COMMITTEE

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First Vice President
(President Elect)
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Jack G. Watts, Burlington
W. J. Smith, Chapel Hill
A. H. Mebane, III, Chapel Hill

GEORGE PLIMPTON CONVENTION BANQUET SPEAKER



George Plimpton is known for doing things that the rest of us only dream about. Playing quarterback for the Detroit Lions, basketball for the Boston Celtics, hockey for the

Boston Bruins, percussion with the New York Philharmonic, photographing centerfolds for *Playboy*, flying on a trapeze for the Clyde Beatty-Cole Brothers Circus are but a few of the professional worlds he has explored. Plimpton has used these and other similarly interesting experiences as the basis for his many books and magazine articles.

In addition to being a celebrated writer Plimpton is acknowledged as a graceful and witty conversationalist. This combined with his wealth of intriguing experiences makes him an entertaining and enlightening speaker. He is a speaker of enormously wide appeal and has appeared with equal success before Boy Scouts, business groups, women's clubs, and university students.

A native of New York City, Plimpton has degrees from Harvard University and King's College, Cambridge University. In 1953, in Paris, he founded *The Paris Review*, a literary quarterly of which he is still editor. He has taught at Barnard College and has been associate editor at both *Horizon Magazine* and *Harper's Magazine*. He is a special contributor to *Sports Illustrated*. His hobbies include bird watching and fireworks (he is the fireworks commissioner of the City of New York).

CONVENTION PROGRAM

NORTH CAROLINA PHARMACEUTICAL ASSOCIATION

104th Annual Meeting Hotel Europa, Chapel Hill April 8, 9, and 10, 1984

SUNDAY, APRIL 8

- 1:00 p.m. REGISTRATION DESK OPENS—Lobby Lounge
 2:00 p.m. NC PharmPAC Meeting—Europa C
 4:00 p.m. Awards Session—Europa C
 5:00 p.m. President's Reception—Europa Terrace
Sponsored by Glaxo, Inc.
 7:30 p.m. *"Dinner on the Hill"—Opening Session Banquet
 Featured Speaker—George Plimpton
 Made possible by Boots Pharmaceuticals
 Induction of H. C. McAllister into the NCPHA Hall of Fame in
 Pharmacy
 William H. Edmondson, Master of Ceremonies

MONDAY, APRIL 9

- 8:00 a.m. REGISTRATION DESK OPENS—Lobby Lounge
 9:00 a.m. NCPHA First Business Session—Europa B & C
 David D. Claytor, President, presiding
 Rite of the Roses—Third Vice President and
 Mrs. A. Rowland Strickland, Jr.
 Report of the UNC School of Pharmacy and the N. C.
 Pharmacy Foundation—Tom S. Miya, Dean
 Report of the Student Branch—Jeffrey D. Shatterly, President
 Committee Report—Consolidated Loan Fund and Endowment Fund—
 Jack K. Wier, Chairman
 "Women Pharmacists: Active, Inactive or Inert?" Charma A. Konnor,
 Food and Drug Administration, Washington
 Report of the Ad Hoc Committee on Constitution and By laws
 Jean Paul Gagnon, Chairman
 "Washington and Pharmacy, Three Perspectives"
 Kenneth G. Starling, Assistant Director
 Bureau of Competition, Federal Trade Commission
 Michael R. Pollard, Director of Policy Analysis
 Pharmaceutical Manufacturers Association
 Stephen R. Moore, Division of Work Experience
 Food and Drug Administration
 "Prescription Drug Shortages and their Effects"—
 Lisa T. Grimes and Alton Ray Davis—UNC School of Pharmacy
 Report of the NC Board of Pharmacy
 David R. Work, Executive Director
 Attendance Prizes

(Continued on page 8)

Convention Program, cont.**MONDAY AFTERNOON**

Owens Illinois Golf Tournament—Chapel Hill Country Club

M. A. Chambers and Kelly Gauer, Co-Chairmen

Pilot Life Tennis Tournament—Ephesus Church Road Courts

Sam P. Stuart and Gerald N. Brunson, Co-Chairmen

2:00 p.m.

WORKSHOPS

to 5:00 p.m.

A. Preventing Stress and Burnout in Pharmacists—Fred M. Eckel—
Europa A

B. Effective Interviewing—Jan Tanner, Burroughs Wellcome—
Europa B

C. Consulting Pharmacy in Long Term Care—Europa C

7:00 to 8:00 p.m. Social Hour—Wine and Cheese Party—Vienna-Brussels Rooms

Sponsored by NC Drug Wholesalers

TUESDAY MORNING

8:00 a.m.

REGISTRATION DESK OPENS—Lobby Lounge

9:00 a.m.

NCPHA Second Business Session—Europa B & C

H. Shelton Brown, Jr., Second Vice President, presiding

Committee Reports

Public Health—Fred M. Eckel, Chairman

Women in Pharmacy—Laura G. Burnham, Chairman

"OTC Counselling for Summer Ailments"

Thomas A. Gossel, Ph.D., Professor of Pharmacology and Toxicology,
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J. Richard Wuest, Pharm.D., Professor of Clinical Pharmacy, University
of Cincinnati

Made possible by a grant from Merrell Dow Pharmaceuticals, Inc.

Attendance Prizes

TUESDAY AFTERNOON

2:00 p.m.

NCPHA Third Business Session—Europa B & C

W. Artemus West, First Vice President, presiding

Committee Reports

Nominating—Joseph L. Johnson, Jr.

Continuing Education—Joni I. Berry, Chairman

President's Address—David D. Claytor

PharmPAC—Henry L. Smith, Secretary-Treasurer

Woman's Auxiliary—Mrs. Larry B. Good, President

Committee Reports

Third Party—W. Darrell Estes, Chairman

Resolutions—Robert J. Allen, Chairman

Public and Professional Relations—Loni T. Garcia, Chairman

Employee/Employer Relations—Sue Hudson, Chairman

Mental Health—Julian Baker, Chairman

Community Pharmacy—David N. Cox, Chairman

Ad Hoc Committee—Comments from the Audience

Time and Place—Al Lockamy, Chairman

Report of the Registrar and Convention Manager—Tom Burgiss

Attendance Prizes

Adjournment

TUESDAY EVENING

- 7:00 p.m. *Installation Dinner—Europa Ballroom
A. H. Mebane, III, Executive Director—Master of Ceremonies
- 9:00 p.m. TMA Dance—Europa Ballroom
Sponsored by the Traveling Member's Auxiliary

*Reservations available from the NCPHA office or registration desk.

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1880-1881	E. M. Nadal, Wilson*	1932-1933	A. Coke Cecil, High Point*
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1888-1889	T. D. Crawford, Oxford*	1940-1941	Joseph Hollingsworth, Mt. Airy*
1889-1890	J. D. Croom, Maxton*	1941-1942	Ralph P. Rogers, Durham*
1890-1891	E. V. Zoeller, Tarboro*	1942-1943	Paul B. Bissette, Wilson*
1891-1892	W. H. Wearn, Charlotte*	1943-1944	R. P. Lyon, Wadesboro*
1892-1893	H. R. Cheers, Plymouth*	1944-1945	W. A. Gilliam, Winston-Salem
1893-1894	N. D. Fetzer, Concord*	1945-1946	W. L. Gilliam, Winston-Salem
1894-1895	J. Hal Bobbitt, Raleigh*	1946-1947	E. C. Daniel, Zebulon*
1895-1896	P. W. Vaughan, Durham*	1947-1948	T. R. Burgess, Sparta*
1896-1897	Augustus Bradley, Burlington*	1948-1949	T. J. Ham, Jr., Yanceyville*
1897-1898	J. P. Stedman, Oxford*	1949-1950	J. C. Jackson, Lumberton
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1901-1902	E. W. O'Hanlon, Winston-Salem*	1953-1954	W. A. Ward, Swannanoa*
1902-1903	H. T. Hicks, Raleigh*	1954-1955	W. L. West, Roseboro*
1903-1904	W. A. Leslie, Morganton*	1955-1956	W. B. Gurley, Windsor*
1904-1905	G. K. Grantham, Dunn*	1956-1957	J. W. Tyson, Greensboro
1905-1906	T. R. Hood, Smithfield*	1957-1958	C. D. Blanton, Kings Mt.*
1906-1907	C. A. Raysor, Asheville*	1958-1959	W. D. Welch, Jr., Washington*
1907-1908	C. R. Thomas, Thomasville*	1959-1960	Sam W. McFalls, Greensboro
1908-1909	J. E. Shell, Lenoir*	1960-1961	Edwin R. Fuller, Salisbury
1909-1910	G. Y. Watson, Southport*	1961-1962	Robert B. Hall, Mocksville
1910-1911	Max T. Payne, Greensboro*	1962-1963	John T. Stevenson, Elizabeth City
1911-1912	E. T. Whitehead, Scotland Neck*	1963-1964	Hoy A. Moose, Mt. Pleasant
1912-1913	J. G. M. Cordon, Clayton*	1964-1965	W. S. Wolfe, Mt. Airy*
1913-1914	C. P. Harper, Selma*	1965-1966	W. T. Boone, Ahoskie
1914-1915	G. C. Goodman, Mooresville*	1966-1967	C. D. Blanton, Jr., Kings Mt.
1915-1916	E. L. Tarkenton, Wilson*	1967-1968	S. D. Griffin, Jr., Burlington
1916-1917	E. G. Birdsong, Raleigh*	1968-1969	James L. Creech, Smithfield
1917-1918	G. A. Matton, High Point*	1969-1970	Earl H. Tate, Lenoir
1918-1919	S. E. Welfare, Winston-Salem*	1970-1971	B. Cade Brooks, Fayetteville
1919-1920	G. R. Pilkington, Pittsboro*	1971-1972	John C. Hood, Jr., Kinston
1920-1921	E. E. Missildine, Tryon*	1972-1973	Donald J. Miller, Morganton*
1921-1922	I. W. Rose, Rocky Mount*	1973-1974	W. Whitaker Moose, Mt. Pleasant
1922-1923	J. A. Goode, Asheville*	1974-1975	W. H. Wilson, Raleigh
1923-1924	P. A. Lee, Dunn*	1975-1976	L. Milton Whaley, Durham
1924-1925	J. P. Stowe, Charlotte*	1976-1977	Thomas R. Burgess, Sparta
1925-1926	A. A. James, Winston-Salem*	1977-1978	Eugene W. Hackney, Lumberton
1926-1927	Clyde Eubanks, Chapel Hill*	1978-1979	Herman W. Lynch, Dunn
1927-1928	R. R. Copeland, Ahoskie*	1979-1980	Joe C. Miller, Boone
1928-1929	Warren W. Horne, Fayetteville*	1980-1981	Jack G. Watts, Burlington
1929-1930	C. C. Fordham, Sr., Greensboro*	1981-1982	J. Marshall Sasser, Smithfield
1930-1931	C. B. Miller, Goldsboro*	1982-1983	Ernest J. Rabil, Winston-Salem
1931-1932	A. E. Weatherley, Greensboro*	1983-1984	David D. Claytor, Greensboro

* Deceased

PRESIDENTS

TRAVELING MEMBERS AUXILIARY

C. D. Sedberry, Baltimore, MD	1914-15	W. W. Morton, Durham	1949-50
J. B. O'Bannon, Charlotte	1915-16	G. C. Hartis, Winston-Salem	1950-51
Lambert Kuhn, Atlanta, GA	1916-17	R. H. Brownie, Charlotte	1951-52
H. T. Kershaw, Baltimore, MD	1917-18	W. S. Gibson, Goldsboro	1952-53
James B. Bowers, Richmond, VA	1918-19	R. L. White, Charlotte	1953-54
John Rowe, Conover	1919-20	F. Stanley Perry, Raleigh	1954-55
John L. Taylor, Oxford	1920-21	J. M. Darlington, Winston-Salem	1955-56
Zeb M. Moore, Charlotte	1921-22	Stephen Forrest, Greensboro	1956-57
James W. Coppedge, Raleigh	1922-23	R. C. NeSmith, Raleigh	1957-58
W. L. Phifer, Charlotte	1923-24	Reuben C. Russell, Charlotte	1958-59
M. J. Leimkuhler, Charlotte	1924-25	O. G. Duke, Raleigh	1959-60
R. W. Rowe, Chester, Va.	1925-26	S. Bruce Wingate, Charlotte	1960-61
W. F. Bradburn, Hendersonville	1926-27	R. Leon Kimball	1961-62
Tom Butler, Reidsville	1927-28	W. P. Brewer	1962-63
J. Floyd Goodrich, Durham	1928-29	W. Forrest Matthews	1963-64
L. Sterling Hubbard, Reidsville	1929-30	J. M. Morgan	1964-65
W. McElveen, Charlotte	1930-31	J. A. Wolfe	1965-66
W. A. Burwell, Raleigh	1931-32	Tom Sanders	1966-67
A. D. Pollard, Raleigh	1932-33	Hugh K. Sconyers, Charlotte	1967-68
P. A. Hayes, Greensboro	1933-34	W. H. Worley, Hickory	1968-69
H. M. Gaddy, Charlotte	1934-35	Charles Harold Daniels, Durham	1969-70
H. L. Barns, New Bern	1935-36	C. Rush Hamrick, Jr.	1970-71
H. L. Hitchcock, Winston-Salem	1936-37	L. D. Davidson, Sr.	1971-72
D. L. Shreve, Greensboro	1937-38	Zack W. Lyon, Durham	1972-73
J. F. Needly, Raleigh	1938-39	J. R. (Bob) Case, Charlotte	1973-74
J. W. Bennick, Charlotte	1939-40	Canie B. Smith, Asheville	1974-75
C. H. Smith, Charlotte	1940-41	Raymond L. Black, Kernersville	1975-76
N. B. Moury, Greensboro	1941-42	W. F. Elmore, Wilmington	1976-77
L. J. Loveland, Durham	1942-43	Roland G. Thomas, Charlotte	1977-78
A. T. Lewallen, Greensboro	1943-44	W. H. Andrews, Winston-Salem	1978-79
M. G. Morris, Greensboro	1944-45	Horace J. Lewis, Raleigh	1979-80
M. G. Morris, Greensboro	1945-46	Charles L. Kimball, Fayetteville	1980-81
Joe L. Wear, Charlotte	1946-47	Leonard G. Phillips, Atlanta	1981-82
F. F. Potter, Charlotte	1947-48	C. Rush (Rusty) Hamrick, III, Shelby	1982-83
C. E. Davis, Winston-Salem	1948-49	Roy M. Moss, Charlotte	1983-84

WHAT'S HAPPENING WITH YOU

Do you have a new pharmacy, job or location? Do you have a new member on your staff or even your family? Have you been working in your community or with any special projects? Are you a community or organization leader or participant?

If so, let us know. By way of the Journal, we want to tell the members of the North Carolina Pharmaceutical Association what their fellow pharmacists are doing. Please complete the form provided below and mail it to the North Carolina Pharmaceutical Association, P. O. Box 151, Chapel Hill, NC 27514. We are looking forward to hearing from each of you!

NAME

ADDRESS

CITY

STATE

ZIP

YOUR NEWS:

**TRAVELING MEMBER'S AUXILIARY
NORTH CAROLINA PHARMACEUTICAL ASSOCIATION
70th ANNUAL MEETING**

OFFICERS AND BOARD OF GOVERNORS

President	Roy M. Moss, Charlotte
First Vice President	W. C. Warren, Greensboro
Second Vice President	Stephen L. Collins, Fayetteville
Secretary Treasurer	L. M. McCombs, Creedmoor
Asst. Secretary Treasurer	David F McGowan, Chapel Hill

BOARD OF GOVERNORS

C. Rush (Rusty) Hamrick, III, Shelby
Leonard G. Phillips, Marietta, Georgia
Charles L. Kimball, Fayetteville
Horace J. Lewis, Raleigh
W. H. Andrews, Winston-Salem

SUNDAY APRIL 8

1:00 p.m.	REGISTRATION DESK OPENS—Lobby Lounge
4:00 p.m.	Awards Session—Europa C
5:00 p.m.	President's Reception—Europa Terrace <i>Sponsored by Glaxo, Inc.</i>
7:30 p.m.	*"Dinner on the Hill"—Opening Banquet—Europa Ballroom

MONDAY, APRIL 9

8:00 a.m.	REGISTRATION DESK OPENS—Lobby Lounge TMA Foundation Breakfast Owens-Illinois Golf Tournament—Chapel Hill Country Club Pilot Life Tennis Tournament—Ephesus Church Road Courts Social Hour—Wine and Cheese Party—Vienna-Brussels Rooms
7:00 p.m. to 8:00 p.m.	<i>Sponsored by N. C. Drug Wholesalers</i>

TUESDAY APRIL 10

8:00 a.m.	REGISTRATION DESK OPENS—Lobby Lounge
11:00 a.m.	Traveling Auxiliary Member's Auxiliary Business Session— Brussels Room
7:00 p.m.	*Installation Dinner—Europa Ballroom
9:00 p.m.	TMA Dance—Europa Ballroom <i>Sponsored by the Traveling Member's Auxiliary</i>

TMA members are invited and welcome to attend any NCPHA business session.

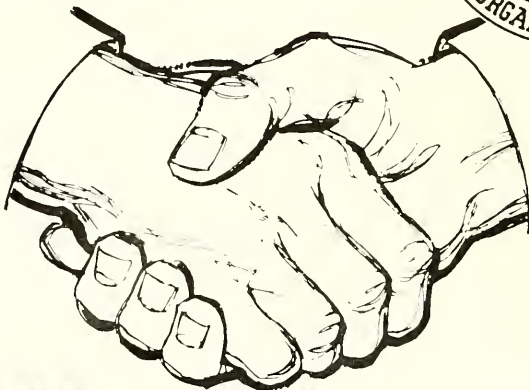
*Reservations available from the NCPHA office or registration desk

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WOMAN'S AUXILIARY NORTH CAROLINA PHARMACEUTICAL ASSOCIATION 57TH ANNUAL CONVENTION

Officers and Executive Board

President	Mrs. Larry B. Good, Morehead City
First Vice President	Mrs. M. Keith Fearing, Manteo
Second Vice President	Mrs. Lamar D. Morse, Raleigh
Recording Secretary	Mrs. Howard Fox, Winston-Salem
Corresponding Secretary	Mrs. W. P. O'Neal, Jr., Belhaven
Treasurer	Mrs. Jack G. Watts, Burlington
Historian	Mrs. Jesse E. Oxendine, Charlotte
Parliamentarian	Mrs. W. Robert Bizzell, Kinston
Advisor	Mrs. Romas T. White, Raleigh
Advisor	Mrs. A. C. Dollar, Winston-Salem
Coordinator	Mrs. A. H. Mebane, III, Chapel Hill

SUNDAY, APRIL 8

1:00 p.m.	REGISTRATION DESK OPENS—Lobby Lounge
1:00 p.m.	Woman's Auxiliary Hospitality Room opens
4:00 p.m.	Awards Session—Europa C
5:00 p.m.	President's Reception—Europa Terrace <i>Sponsored by Glaxo, Inc.</i>
7:30 p.m.	*"Dinner on the Hill"—Opening Banquet—Europa Ballroom

MONDAY, APRIL 9

8:00 a.m.	REGISTRATION DESK OPENS—Lobby Lounge
9:30 a.m.	Buses begin loading for tour of Burroughs Wellcome Co.
10:00 a.m.	Burroughs Wellcome Co. tour; Research Triangle Park
12:00 noon	Buses begin loading at BW for luncheon at the Governor's Inn
12:30 p.m.	Luncheon at the Governor's Inn <i>Sponsored by Burroughs Wellcome Co.</i>
2:20 p.m.	Buses begin loading for return to the Hotel Europa
7:00 p.m.	Social Hour—Wine and Cheese Party—Vienna-Brussels Rooms <i>Sponsored by N. C. Drug Wholesalers</i>

TUESDAY, APRIL 10

8:00 a.m.	REGISTRATION DESK OPENS—Lobby Lounge
9:00 a.m.	Woman's Auxiliary Coffee—Europa A
9:30 a.m.	Woman's Auxiliary Business Session—Europa A
11:30 a.m.	Buses leave for Morehead House—UNC Campus
12:00 noon	Luncheon, Fashion and Tour of Morehead House
3:00 p.m.	Tea at UNC President and Mrs. William Friday's Home
4:00 p.m.	Buses return to Hotel Europa
7:00 p.m.	*Installation Dinner—Europa Ballroom
9:00 p.m.	TMA Dance <i>Sponsored by the Traveling Member's Auxiliary</i>

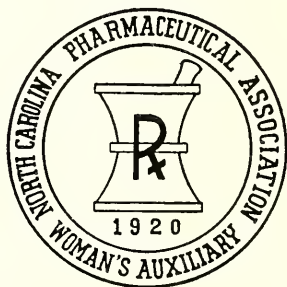
*Reservations available from the NCPHA office or registration desk

WOMAN'S AUXILIARY PRESIDENTS

1920	Mrs. F. W. Hancock	1978	Mrs. Milton K. Skolaut
1921	Mrs. F. W. Hancock	1979	Mrs. Milton K. Skolaut
1922	Mrs. F. W. Hancock	1980	Mrs. J. Marshall K. Sasser
1923	Mrs. F. W. Hancock	1981	Mrs. Shelton B. Boyd
1924	Mrs. F. W. Hancock	1982	Mrs. Romus T. White, Jr.
1925	Mrs. F. W. Hancock	1983	Mrs. A. C. Dollar
1926-1933	(AUXILIARY INACTIVE)	1983	Mrs. Larry B. Good
1934	Mrs. Lloyd Jarrett		
1935	Mrs. J. C. Hood		
1936	Mrs. D. L. Shreve		
1937	Mrs. A. L. Fishel		
1938	Mrs. P. A. Hayes		
1939	Mrs. I. W. Rose		
1940	Mrs. H. P. Watson		
1941	Mrs. J. K. Civil		
1942	Mrs. C. C. Fordham		
1943	Mrs. Phil Gattis		
1944	Mrs. C. H. Smith		
1945	Mrs. J. C. Jackson		
1946	Mrs. J. C. Jackson		
1947	Mrs. W. R. Adams		
1948	Mrs. Homer Starling		
1949	Mrs. M. L. Jacobs		
1950	Mrs. W. A. Ward		
1951	Mrs. Stephen T. Forrest		
1952	Mrs. T. J. Ham, Jr.		
1953	Mrs. J. M. Darlington		
1954	Mrs. Graham Culbreth		
1955	Mrs. Edwin R. Fuller		
1956	Mrs. W. P. Brewer		
1957	Mrs. P. W. Kendall		
1958	Mrs. W. D. Welch, Jr.		
1959	Mrs. Ralph P. Rogers		
1960	Mrs. Thomas M. Holland		
1961	Mrs. F. F. Potter		
1962	Mrs. Leslie M. Myers		
1963	Mrs. John T. Stevenson		
1964	Mrs. David D. Claytor		
1965	Mrs. George W. Markham		
1966	Mrs. Charles D. Blanton, Jr.		
1967	Mrs. James L. Creech		
1968	Mrs. William G. Forrest		
1969	Mrs. Don K. Chapman		
1970	Mrs. William P. Wells		
1971	Mrs. W. Grover Creech		
1972	Mrs. George H. Cocolas		
1973	Mrs. William G. Thames		
1974	Mrs. J. R. Hickmon		
1975	Mrs. J. Weaver Kirkpatrick		
1976	Mrs. Morris E. Hedgepeth		
1977	Mrs. L. Milton Whaley		



MRS. LARRY B. GOOD
President, Woman's Auxiliary



AUXILIARY COMMITTEES**Marilyn Edmondson, General Chairman****PRIZES:**

Betty Coakley
Neta Whaley
Rebecca Work

FASHION SHOW:

Rheta Skolaut
Neta Whaley

PUBLICITY:

Barbara Smith

HOSPITALITY:

Jene Baker
Maria Casto
Sue Harris
Avis McBay
Stella Paoloni
Dixie Peterson
Sybil Skakle
Dixie Wier

TRANSPORTATION:

Marian Chambers
Avis McBay

MONDAY LUNCHEON:

Blenda Morris, Burroughs Wellcome Co.
Marilyn Edmondson

TUESDAY TEA:

Erie Cocolas
Midori Miya
Babette Blaug
Peggy Eckel
Ann Gagnon
Amy Lee
Betsy Mebane
Stella Paoloni
Barbara Smith

TUESDAY LUNCHEON:

Rebecca Work
Jan Pittman

PAGES:

Nancy Raasch
Thea Cocolas
Juliana Smith
Dana Work

DECORATIONS:

Sunday Evening— Pam Swarbrick
Maria Casto
Peggy Eckel
Barbara Smith
Dixie Wier

Monday Luncheon—Blenda Morris, Burroughs Wellcome Co.
Marilyn Edmondson

Tuesday Luncheon—Midori Miya

Tuesday Evening— Betsy Mebane
Erie Cocolas
Rheta Skolaut
Neta Whaley




Resolutions are solicited to be presented at the Annual Convention in April. Resolutions may address any issue or position and will be reviewed by the Resolutions Committee, Robert J. Allen, Chairman, prior to reading at the Convention. Resolutions need not be in final form and your comments are welcomed.

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NOMINATING COMMITTEE REPORT

The report of the nominating committee will be presented at the 104th Annual Convention of the North Carolina Pharmaceutical Association in Chapel Hill, April 8, 9 and 10. This report will be given Tuesday afternoon and nominations may be made from the floor. Ballots will be mailed on or before May 10 as provided in the Constitution to all members of record on that date. Ballots will be tallied by the election committee in June.

COMMITTEE REPORT

We, the 1984 Committee on Nominations, do present the following slate of officers in accordance with the By-Laws of the North Carolina Pharmaceutical Association. This slate, together with any nominations from the Convention floor, will be submitted to the membership for mail ballot within thirty days after the adjournment of the 1984 Annual Meeting.

Those officers duly elected will be installed at the next Annual Meeting and will serve for the 1985-86 year unless otherwise noted.

FOR FIRST VICE PRESIDENT (President-Elect)

M. Keith Fearing, Jr., Manteo
Pamela U. Joyner, Raleigh

FOR SECOND VICE PRESIDENT

W. Robert Bizzell, Kinston
W. Keith Elmore, Wilmington

FOR THIRD VICE PRESIDENT

Joseph A. Edwards, Jr., Raleigh
William T. Sawyer, Charlotte

FOR MEMBER OF THE EXECUTIVE COMMITTEE ONE YEAR TERM (Elect Three)

J. Frank Burton, Jr., Greensboro
Loni T. Garcia, Chapel Hill
Joseph L. Johnson, Jr., Greensboro
Edward D. Frenier, Asheville
Connie H. Garrison, Lexington
George M. Willets, III, Wilmington

FOR DIRECTOR OF THE N. C. PHARMACY FOUNDATION FOUR YEAR TERM (Elect Four)

Joseph F. Browning, Jr., Greensboro
Thomas R. Burgiss, Sparta
Gilbert C. Hartis, Jr., Winston-Salem
Martha G. Peck, Raleigh
Laura G. Burnham, Winston-Salem
Thomas P. Davis, Yanceyville
John C. Hood, Jr., Kinston
L. Milton Whaley, Durham

NCPHA COMMITTEE ON NOMINATIONS

Waits A. West, Chairman
John O. Brown
Joseph L. Johnson, Jr.
William H. Randall, Jr.
Charles D. Blanton, Jr.
Bruce R. Canaday
A. Wayne Pittman

NORTH CAROLINA SOCIETY OF HOSPITAL PHARMACISTS

On Thursday evening, February 2, 1984, the NCSHP presented its Meritorious Service Award to Gilbert C. Colina in recognition of his role in founding the NCSHP. Over 30 members and guests participated in this recognition dinner. NCSHP Historian, Robert Allen, introduced Dr. Colina and presented the Award.

On Friday, February 3, 1984, a business meeting of the NCSHP was held in Charlotte, North Carolina. The meeting was called to order by President Douglas. She briefly reviewed her presidential year and then introduced the retiring officers and continuing officers of the Society. She presented the proposed revised Constitution and Bylaws for member information. The newly elected officers, William T. Sawyer, President; Stephen C. Dedrick, President Elect; Joni I. Berry, David A. Hoffman and June H. McDermott, Board of Directors, were installed by Dr. Douglas. Mr. Sawyer was introduced. He presented Dr. Douglas with the NCSHP President's Plaque. Don Boughton presented Dr. Douglas with the Geigy Leadership Award. Mr. Sawyer gave his presidential address before the meeting was adjourned.

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Lawrence Stevenson Mountain, Ph-Mgr.

Issued 12/15/83 L.S.P.

The Medicine Shoppe
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Southern Pines, NC 28387
Paula Clayton Haines, Ph-Mgr.

Issued 1/3/84 T/O

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2915 Pink Hill Road
Kinston, NC 28501
Atlas Eugene Newsome, Ph-Mgr.

Issued 1/3/84 L.S.P.

Kerr Drugs
1015 Spence Ave.
Goldsboro, NC 27530
Audrey Heath, Ph-Mgr.

Issued 1/3/84

Revco Discount Drug Center
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Rockingham, NC 28379
Newell C. Griffin, Jr., Ph-Mgr.

Issued 1/3/84

Thigpen Pharmacy
111 Railroad Street
Pikesville, NC 27863
Walter Talmage Thigpen, Ph-Mgr.

Issued 1/3/84 T/O

Airheart's Drug Store
15 Market Street
Concord, NC 28025
Jack W. Airheart, Ph-Mgr.

Issued 1/5/84 T/O

Landis Drug
113 S. Central Ave., P. O. Box 126
Landis, NC 28088
Douglas A. Crawley, Ph-Mgr.

Issued 1/5/84 T/O

Phil's Pharmacy, Inc.
213 1st Ave. SE, P. O. Box 1868
Hickory, NC 28603
Ed F. Swann, Jr., Ph-Mgr.

Issued 1/5/84 T/O

CANDIDATES LICENSED BY RECIPROCITY

Licensed July 19, 1983

Siu Y. Adams
Maryland

John D. Allen
West Virginia

Geraldine D. Anastasio
South Carolina

Michele C. Bonistalli
Pennsylvania

Dewey A. Burdine, Jr.
South Carolina
Larry M. Burgess

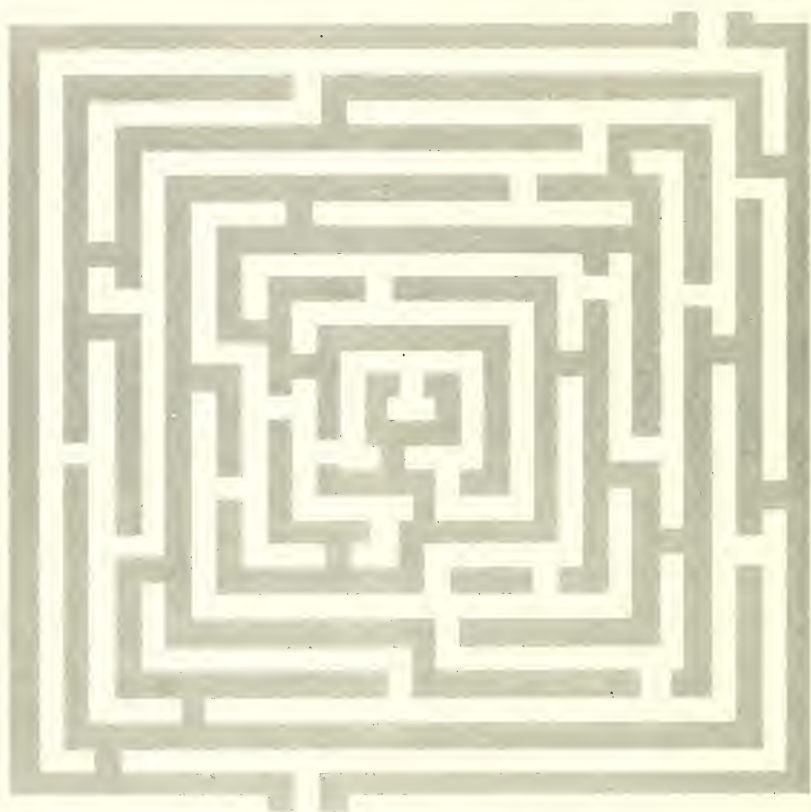
South Carolina
Paul E. Carpenter

Alabama
James E. Chase

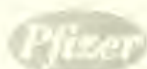
Maine
Patricia A. Chase
Maine

(Continued on page 23)

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Margaret A. Crowther
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Ricky M. Ferguson
South Carolina

Carl H. Fisher
Ohio

Diane F. Gburek
Indiana

Douglas C. Guider
Ohio

Jeffrey S. Hennis
South Carolina

Douglas R. Huston
Ohio

Sally P. Huston
Ohio

John William Kipps
Virginia

Jan R. Klein
South Carolina

Phyllis R. Kurlander
Arizona

Stanley R. Leggett
South Carolina

Janet L. Mahoney
Virginia

Glenn S. Marceil
Wisconsin

Linda K. Marceil
Wisconsin

Steven J. Melamut
Rhode Island

Steven L. Morris
Tennessee

Richard L. Murphy
Ohio

Colleen J. O'Linn
Texas

Charles A. Peloquin
Connecticut

Leland D. Pratt
South Dakota

James W. Sauter
South Carolina

Cathy Sewell
Georgia

Theodore Shapiro
New York

Kathy K. Shuler
South Carolina

Elizabeth J. Simmons
Virginia

Den D. Tellman
North Dakota

John R. Thompson
Tennessee

Richard H. Walsh
Maryland

Berthica M. Zuloaga
New York

Licensed September 20, 1983

Bruce S. Barger
Virginia

Jack Edward Blitz
Ohio

Manny Phillip Borinsky
West Virginia

Allen Marshall Charney
New Jersey

Elizabeth Hedlund Corder
Maryland

Margaret Marie Dostal
Minnesota

Linda McCollum Fried
South Carolina

James Arthur Green
West Virginia

Thomas R. Green, Sr.
Virginia

David Wayne Hatley
South Carolina

Thomas H. Holland, Sr.
Virginia

(continued on page 24)

Licensed by Reciprocity

Kathleen Gurney Ketcham
South Carolina

Randall Layne Knott
Virginia

Sherron Elizabeth Knowles
Georgia

Gerald Henry Kutza
Illinois

Thomas Charles Laiosa
New York

David Martin Lambert
Michigan

Robert Allen Leghart
Ohio

John August Mando
New York

Amy Lamb McCartt
Alabama

Robert Nance McCartt
Alabama

John Dennegan McLaughlin
Alabama

Gerald Charles Metscher
Wisconsin

Janet Will Nuse
New York

Patrick Louis Pierson
Indiana

Joseph Edward Platz
New York

Claudine Witcher Pride
Iowa

Rhonda Jane Riner
Georgia

Randall Lee Von Seggern
Illinois

Marsha I. Smith Sondergaard
Ohio

Thomas Edward Sullivan
Massachusetts

Douglas Calvin Wager
New York

Oliver B. Ware
Georgia

Ronald Thomas Wassel
Pennsylvania

Diane Saunders Whitten
Ohio

Grace Christian Wilkinson
Virginia

James Henry Wise
Tennessee

James Penland Worden, Jr.
Tennessee

Licensed November 15, 1983

Emily B. Conerly
Mississippi

Michael Dimenna
New Jersey

Terese M. Dunn
Pennsylvania

Charles M. Gibson
Michigan

Charlene J. Harman
West Virginia

Craig Frederick Kirkwood
New York

Terry L. Little
Michigan

Larry Mitchell Little
Michigan

Nancy Ann Magyer
Ohio

Ronald Wayne Mason
South Carolina

Lee M. McDow
South Carolina

Norma J. Mobley
South Carolina

Ronnie D. Proffitt
South Carolina

Vickie R. Schumucker
Ohio

Linnea K. Stalnaker
Iowa

Nancy M. Stephens
Virginia

Edythe R. Striebel
Indiana

Alicia C. Thompson
Maryland

Melvin E. Urtel
Michigan

Licensed January 17, 1984

William Eugene Brown
South Carolina

Rebecca F. Chaney
Mississippi

Edward Michael Dunn
Pennsylvania

Daniel Gilbert Garrett
Michigan

Michael Luke Godwin
South Carolina

Julie Ann Jacobs
Michigan

John Douglas Manson
Mississippi

Nancy Ruth Morton
Tennessee

James Herbert Patterson
Tennessee

Jeffrey C. Pribyl
New York

Leslie George Reid
New York

Stephen M. Rogers
South Carolina

Robert Allen Stagner
Iowa

Earle Bennett Watkins
Virginia

Anita Moore Worden
Tennessee



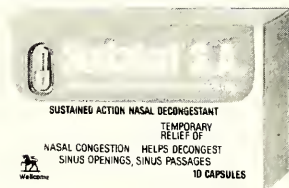
Abraham Lincoln said "I do the very best I know how, the very best I can, and I mean to keep doing so until the end. If the end brings me out all right, what is said against me won't amount to anything. If the end brings me out wrong, then ten angels swearing I was right won't make no difference."

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North Carolina 27709

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Nags Head, N. C.

Mr. Eddie Faulkner
Mr. Gary Faulkner
Faulkner's Drugs
Monroe, N. C.

Mr. Milton Skolaut
Duke University Hosp. Pharmacy
Durham, N. C.

Mr. Ken Hardin
Mr. Marshall Hardin
Hardin's Drugs
Forest City, N. C.

Mr. Joe Davis
Trindale Pharmacy
High Point, N. C.

Mr. Dan Rhodes
Burke Pharmacy
Morganton, N. C.

Mr. Buzz Merritt
Mr. Wayne Farris
Catawba Pharmacy
Belmont, N. C.

Mr. Carl Craddock
Metroview Pharmacy
Charlotte, N. C.

Mr. Wesley Bruce
Mint Hill Pharmacy
Mint Hill, N. C.

Mr. Bill Morris
Smith Drug
Waynesville, N. C.

Mr. Harold Mallion, Jr.
Fairmont Drug
Fairmont, N. C.

Mr. Talmage Thigpen
Wayne Medical Center
Pikeville, N. C.

Mr. Radford Rich
The Medicine Shoppe
Fayetteville, N. C.

Mr. Buddy Pigg
Mr. Tim Pigg
Sentry Drug #16
Lincolnton, N. C.

Mr. Irwin Kaplan
Sneads Ferry Pharmacy
Sneads Ferry, N. C.

Mr. Frank Yarborough
The Medicine Shoppe
Raleigh, N. C.

Mr. Allan Boyd
Kenly Drug
Kenly, N. C.

Mr. Phillip Crouch
Crouch Ideal Drug
Asheville, N. C.

Mr. Ed Safrit
Stanley Drug
Charlotte, N. C.

Mr. Ben Brady
Webster Pharmacy
Fairmont, N. C.

Mr. William Brady
The Medicine Shoppe
Lumberton, N. C.

Mr. Larry Spears
Spears Pharmacy
Roanoke Rapids, N. C.

Mr. Howie Morrison
Medicare Supply
Asheville, N. C.
Charlotte, N. C.

Mr. John McNeil
Medicare Supply
Winston-Salem, N. C.
Greenville, N. C.

Mr. Lynn Waugh, Jr.
Statesville Drug
Statesville, N. C.

Mr. Dale Tysinger
Tar Heel Drugs
Robbins, N. C.

Mr. Sy Holder
National Environmental
Protection Agency
Research Triangle, N. C.

Mr. Ned Clark
Benvenue Village Pharmacy
Rocky Mount, N. C.

Mr. Milton Langston
Langston Pharmacy
New Bern, N. C.

Mr. G. T. Thorne
Mr. Bill Thorne
Thorne's Drug
Tarboro, N. C.

Mr. Joe Minton
Colonial Pharmacy
Murfreesboro, N. C.

Mr. Ron Forrester
DARTCO Drug-Food
Gastonia, N. C.

Mr. Harold "Buzz" Tanner
Denver Pharmacy
Denver, N. C.

Mr. Jim Inabinet
Mr. Dan Seckler
Family Pharmacy
Hickory, N. C.

Mr. Mickey Whitehead
Ramseur Pharmacy
Ramseur, N. C.

Mr. Richard Floyd
Mr. Stanley Leggett
The Medicine Shoppe
Albemarle, N. C.

Mr. Bob Giles
Mr. Barry Carpenter
Troy Drug
Troy, N. C.

Mr. Charles Stine
Indian Trail Pharmacy
Indian Trail, N. C.

Mr. Lazelle Marks
Medical Center Pharmacy
Rockingham, N. C.

Mr. Luke Marion
The Medicine Shoppe
Southern Pines, N. C.

Mr. Larry Huffman
Granite Drug
Granite Falls, N. C.

Mr. Harold "Buzz" Tanner
Denton Drug Store
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Mr. Bob Taylor
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Crossnore, N. C.

Mr. Bob Giles
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YOU THINGS YOU
NEVER LEARNED
BEFORE - BUT WISH
YOU HAD.**



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*Job No. 3019
State Journals - November & December, 1981
Prepared by Aves Advertising, Inc.*

CONVENTION SITES

Raleigh, Senate Chamber	1880 Aug. 11th	Asheville, Battery Park Hotel	1938 June 27-29
Newbern, Masonic Hall	1881 Aug. 9-10	High Point, The Hotel Sheraton	1939 May 15-18
Winston, Opera House	1882 Aug. 9-10	Charlotte, Hotel Charlotte	1940 May 21-23
Wilmington, Germania Lodge No. 4	1883 Aug. 8-9	Durham, Washington-Duke Hotel	1941 May 13-15
Charlotte, Chamber of Commerce Hall	1884 Aug. 13-14	Winston-Salem, Hotel Robert E. Lee	1942 May 11-13
Greensboro, Central Hotel	1885 Aug. 12-13	Greensboro, O. Henry Hotel	1943 May 18-19
Fayetteville, Carolina Club	1886 Aug. 11-12	Raleigh, Sir Walter Hotel	1944 May 23-24
Asheville, Opera Hall	1887 Aug. 4-5	Convention was cancelled	1945
Goldsboro, Kornegay's Hall	1888 Aug. 8-9	Asheville, George Vanderbilt Hotel	1946 April 14-16
Durham New County Court-House	1889 May 21-22	Charlotte, Hotel Charlotte	1947 April 27-30
Morehead City,		Carolina Beach, Hotel Bame	1948 June 8-10
N. C. Teachers Assembly Hall	1890 July 8-10	Durham, Washington-Duke Hotel	1949 May 3-5
Morehead City,		Asheville, George Vanderbilt Hotel	1950 April 23-26
N. C. Teachers Assembly Hall	1891 July 8	Pinehurst, Carolina Hotel	1951 May 20-22
Raleigh, Hall of Phalanx Lodge	1892 Aug. 10-11	Pinehurst, Carolina Hotel	1952 May 21-23
Greensboro,		Pinehurst, Carolina Hotel	1953 May 24-26
Chamber of Commerce Hall	1893 Aug. 9-10	Winston-Salem, Robert E. Lee Hotel	1954 April 11-13
Asheville, Y.M.C.A. Hall	1894 Sept. 3	Greensboro, O. Henry Hotel	1955 May 15-17
Morehead City,		Raleigh, Sir Walter Hotel	1956 May 8-10
N. C. Teachers Assembly Hall	1895 July 10-11	Charlotte, Hotel Charlotte	1957 May 5-7
Morehead City,		Durham, Washington-Duke Hotel	1958 April 13-15
N. C. Teachers Assembly Hall	1896 July 22-23	Asheville, George Vanderbilt Hotel	1959 April 19-21
Raleigh, Manteo Lodge I.O.O.F.	1897 May 12-13	Winston-Salem, Hotel Robert E. Lee	1960 May 8-10
Charlotte, Y.M.C.A. Hall	1898 May 18-19	Greensboro, King Cotton Hotel	1961 April 16-18
Durham, Odd Fellow's Hall	1899 May 18-19	Raleigh, Sir Walter Hotel	1962 April 8-10
Wilmington, Pythian Hall	1900 July 18-19	Pinehurst, The Carolina	1963 May 12-14
Winston-Salem, Y.M.C.A. Hall	1901 June 19-20	Charlotte, Queen Charlotte Hotel	1964 April 12-14
Morehead City, City Hall	1902 June 19-20	Durham, Jack Tar Hotel	1965 May 16-18
Morehead City, Atlantic Hotel	1903 June 11-12	Asheville,	
Asheville, Battery Park Hotel	1904 July 14-15	Battery Park & George Vanderbilt	1966 June 12-14
Morehead City, Atlantic Hotel	1905 June 22-23	Winston-Salem, Hotel Robert E. Lee	1967 May 7-9
Wrightsville Beach, Seashore Hotel	1906 June 14-15	Greensboro, Statler Hilton Inn	1968 April 7-9
Lake Toxaway, Toxaway Inn	1907 June 13-14	Raleigh, Sherton-Sir Walter Hotel	1969 April 27-29
Morehead City, Atlantic Hotel	1908 July 8-10	Charlotte, Coliseum Downtowner Hotel	1970 April 12-14
Greensboro, Benbow Hotel	1909 June 23-25	Durham, Durham Hotel	1971 April 18-20
Charlotte, Selwyn Hotel	1910 June 8-10	Wilmington, Timme Plaza	1972 April 16-18
Morehead City, Atlantic Hotel	1911 July 12-14	Boone, Continuing Education Center	1973 June 10-13
Waynesville, Courthouse	1912 June 26-28	Pinehurst,	
New Bern, Graded School Auditorium	1913 June 11-13	Pinehurst Hotel & Country Club	1974 March 24-26
Hendersonville, Court House	1914 June 17-19	Winston-Salem, Regency Hyatt Hotel	1975 April 13-15
Durham, Elks Hall	1915 June 15-17	Wilmington, The Wilmington Hotel	1976 April 11-13
Wrightsville Beach, Oceanic Hotel	1916 June 20-22	Greensboro, Holiday Inn Four Seasons	1977 April 24-26
Asheville, Battery Park Hotel	1917 June 19-21	Asheville, The Great Smokies Hilton	1978 April 16-18
Raleigh, Chamber of Commerce	1918 June 19-21	Raleigh, Royal Villa	1979 May 27th
Wrightsville Beach, Oceanic Hotel	1919 June 24-26	Fly Cruise aboard the Sunward II	May 28-June 1
Asheville, Battery Park Hotel	1920 June 22-25	Raleigh, The Hilton Inn	1980 April 13-15
Charlotte, Selwyn Hotel	1921 June 21-23	Charlotte, Radisson Plaza	1981 April 26-29
Winston-Salem, Robert E. Lee Hotel	1922 June 27-29	Winston-Salem, Hyatt House	1982 April 4-6
Greenville, S. C., in conjunction with		Boone, Continuing Education Center	June 19-21
S. C. PhA. Hotel Imperial	1923 June 26-28		
Wrightsville Beach, Oceanic Hotel	1924 June 24-26		
Blowing Rock, Mayview Manor	1925 June 23-25		
Enroute to & from N. Y. City on an			
old Dominion Steamship	1926 June 21-25		
Greensboro, O. Henry Hotel	1927 June 21-23		
Morehead City, Morehead Villa	1926 June 19-21		
Asheville, Battery Park Hotel	1929 June 18-20		
Raleigh, Sir Walter Hotel	1930 Aug. 11-13		
Wrightsville Beach, Oceanic Hotel	1931 June 23-25		
High Point, The Sheraton Hotel	1932 June 20-23		
Charlotte, The Hotel Charlotte	1933 June 19-22		
Durham, The Washington Duke Hotel	1934 June 25-27		
Winston-Salem, Hotel Robert E. Lee	1935 May 13-15		
Greensboro, O. Henry Hotel	1936 May 12-14		
Raleigh, Sir Walter Hotel	1937 May 10-12		



BOWL OF HYGEIA AWARD RECIPIENTS

- 1959—Harold Vann Day, Spruce Pine
1960—Ralph P. Rogers, Jr., Durham
1961—William H. Randall, Lillington
1962—Charles D. Blanton, Jr., Kings Mountain
1963—David R. Davis, Williamston (deceased)
1964—John T. Henley, Hope Mills
1965—Jesse Miller Pike, Concord
1966—John E. Mills, Mount Airy
1967—William Whitaker Moose, Mount Pleasant
1968—Roger H. Sloop, Rural Hall
1969—Thomas Reeves Burgiss, Sparta
1970—Marsha Hood Brewer, Pink Hill
1971—Edwin R. Fuller, Salisbury
1972—Lloyd Milton Whaley, Wallace
1973—Lloyd M. Senter, Carrboro
1974—James R. Creech, Smithfield
1975—B. Cade Brooks, Fayetteville
1976—W. Prentiss O'Neal, Belhaven (deceased)
1977—Kenneth Edwards, Stantonsburg
1978—Barney Paul Woodard, Princeton
1979—Richard Homer Andrews, Burlington
1980—Evelyn P. Lloyd, Hillsborough
1981—James C. Gabriel, Troutman
1982—Eugene W. Hackney, Lumberton
1983—Leon I. Graham, Wallace

DON BLANTON AWARD RECIPIENTS

- 1966—Robert B. Hall, Mocksville
1967—John T. Henley, Hope Mills
1968—James W. Harrison, Asheville
1969—W. J. Smith, Chapel Hill
1970—Jesse Miller Pike, Concord
1971—Walter Saunders, Greensboro
1972—Frank F. Yarborough, Raleigh
1973—Charles Michael Whitehead, Ramseur
1974—Steven R. Moore, Chapel Hill
1975—Claude U. Paoloni, Chapel Hill
1976—H. C. McAllister, Chapel Hill
1977—LeRoy D. Werley, Chapel Hill
1978—Milton W. Skolaut, Chapel Hill
1979—Tom S. Miya, Chapel Hill
1980—Rex Paramore, Nashville
1981—William H. Randall, Jr., Lillington
1982—W. Robert Bizzell, Kinston
1983—Paul B. Bisette, Jr., Wilson

PHARMACIST-OF-THE-YEAR

- 1948—Edward Wilkins O'Hanlon, Winston-Salem (deceased)
1949—Clyde Eubanks, Chapel Hill (deceased)
1950—Julius Albert Suttle, Shelby (deceased)
1951—Elbert Clifton Daniel, Zebulon (deceased)
1952—Charles M. Andrews, Burlington (deceased)
1953—John Cogdell Hood, Kinston (deceased)
1954—Kelly E. Bennett, Bryson City (deceased)
1955—Robert Royal Copeland, Ahoskie (deceased)
1956—Wade Axom Gilliam, Winston-Salem
1957—Waits Artemus Ward, Swannanoa (deceased)
1958—William Burden Gurley, Windsor (deceased)
1959—Wilbur Latham West, Roseboro (deceased)
1960—Roger Atkinson McDuffie, Greensboro (deceased)
1961—Jasper Carlton Jackson, Lumberton
1962—Thomas Jones Hamm, Jr., Yanceyville (deceased)
1963—William S. Wolfe, Mount Airy (deceased)
1964—William Dorsey Welch, Jr., Washington (deceased)
1965—Rowe B. Campbell, Taylorsville (deceased)
1966—Alfred Newman Martin, Roanoke Rapids (deceased)
1967—I. Thomas Reamer, Durham
1968—John Thomas Stevenson, Elizabeth City
1969—Hoy A. Moose, Mount Pleasant
1970—Bernard Rudolph Ward, Goldsboro
1971—Robert Buckner Hall, Mocksville
1972—John T. Henley, Hope Mills
1973—June Bush Provo & Jean Bush West, Raleigh
1974—Edwin Rudolph Fuller, Salisbury
1975—Jesse M. Pike, Concord
1976—B. Cade Brooks, Fayetteville
1977—David R. Davis, Williamston (deceased)
1978—James Leonard Creech, Smithfield
1979—Gilbert Clyde Hartis, Winston-Salem
1980—Ralph P. Rogers, Jr., Durham
1981—Harold Vann Day, Spruce Pine
1982—W. Thomas Boone, Ahoskie
1983—Rheta E. and Milton W. Skolaut, Chapel Hill

UNC SCHOOL OF PHARMACY

Congratulations to the December 1983 Graduates

Mark Eric Allen—Kernersville
Kevin Lee Almond—Sanford
Chris Yvonne Blackmon—Durham
Van White Blalock—Durham
Samia S. Botros—Chapel Hill
Amy Jean Cline—Shelby
Sarah Ann Clodfelter—Trinity
Mark Kerry Crump—Hickory
Gregory Cecil Deese—Charlotte
Christopher Thad Dixon—New Bern
Mary Margaret Ferramosca—Richmond
Timothy Andrew Gardner—Salisbury
Michael Douglas Gooch—Ruffin
Irene Oberste-Vorth Griffin—Fayetteville
James Boyd Groce, III—Randleman
William Edward Hemingway, Jr.—Bethel
Deborah Ann Hooker—Wilmington
Mae Lloyd Jackson—Rocky Mount
Joseph Kim Koontz—Jefferson
Sarah Elizabeth Maner—Kings Mountain

Timothy Gerald Matthews—Dobson
Thomas Wayne McHugh—Jacksonville
Suzanne Mobley—Robersonville
G.H.S. Bert Mueller—High Point
Michael Olcott Murphy—Louisburg
Thomas Joseph Norkus—Hendersonville
Scarlett Hicks Owens—Charlotte
Paul William Renaud—Raleigh
Tonia Allison Sewell—Wilmington
Cynthia Glendora Smith—Kernersville
Julie Elaine Smith—Sanford
Raymond Joseph Spillane—Havelock
Walter Hardin Spivey, Jr.—Carthage
Laura Marie Stewart—Greensboro
James Michael Tate—Greensboro
Sara Kay Harrell Taylor—Hope Mills
Michelle Dawn Tousignant— Mooresville
Gregory Donald Webb—Carrboro
Oi Tung Wong—Chapel Hill
Gwendolyn Delores Simmons—New Bern

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ALAMANCE COUNTY

The 1984 officers of the Alamance County Pharmaceutical Society are:

President—Willie Jennings
Vice President—David Smith
Secretary-Treasurer—Jack G. Watts

Twenty three members of the Alamance County Pharmaceutical Society just completed three months of Pharmaceutical Continuing Education through the UNC School of Pharmacy and the Greensboro AHEC. Another three-months course will begin in March.

CHARLOTTE WOMAN'S PHARMACEUTICAL AUXILIARY

On November 8, 1983, the Charlotte Woman's Pharmaceutical Auxiliary held its 13th annual holiday bazaar. The proceeds were \$481.00. The luncheon meeting was held at the Cosmos Steak House.

The December Christmas party was combined with the Mecklenburg Pharmaceutical Society at the Ramada Inn on December 14, 1983. Sixty attended the dinner and the auxiliary sold poinsettias and Christmas trees as a fund raising project.

The January meeting was held at the Cosmos Steak House. The guest speaker was Mrs. Robert Gilley. Her message on "Stress and How to Cope" was very enlightening to all the ladies.

One of our oldest charter members, Mrs. Mae Dixon, died in January at the age of 96.

Respectfully submitted,

Billie Dagenhart

Corresponding Secretary

FOSTER FILES FOR RE-ELECTION

William L. Foster, Mocksville pharmacist and President of Foster-Ranch Drug Store, has filed for re-election to the Davie County Board of Commissioners. Foster is a 1965 graduate of the UNC School of Pharmacy and is seeking his third consecutive term on the Board.

GUILFORD COUNTY

The regular monthly meeting of the Guilford County Society of Pharmacists was held

on Tuesday, January 10, 1984 at Moses Cone Hospital, Room 6724, at 8 pm. Guest speaker for the evening was Thomas Walden, Medical Education Representative for Upjohn, who discussed sleep disorders and their relative drug therapy.

Following the program, a short business session was held in which new officers for 1984 were installed. They are:

President: **Marilyn McConnell**
Vice President: **Tim Rice**
Sec.-Tres.: **Frank Burton**

Also a Program Committee was appointed to plan programs and activities for the upcoming year. Members of this committee are: Tim Rice, Chairman, Steve Saxe, David Wheeler, Debbie Houston, Ken Brasfield, and Peter Gal.

GAGNON CANDIDATE FOR AACP PRESIDENT

Jean Paul Gagnon, Ph.D., Professor and Division Head, Division of Pharmacy Administration, UNC School of Pharmacy, is one of two candidates for the presidency of the American Association of Colleges of Pharmacy, for the 1984-85 year. Gagnon received a B.S. in Pharmacy and an M.S. in Pharmacy Administration from the University of Connecticut and a Ph.D. in Pharmacy Administration from the Ohio State University. He has been a member of the UNC faculty since 1975, after four years at the University of Iowa. His research interests are in the application of administrative and social science methodology of drug distribution and economic aspects of pharmaceutical marketing and drug policy. He has authored or co-authored approximately fifty articles and in 1981-82 was a Robert Wood Johnson Health Policy Fellow in Washington, and was on the staff of the U. S. House of Representatives Energy and Commerce Subcommittee on Health. He was made a Fellow of the American Pharmaceutical Association Academy of Pharmaceutical Sciences in 1983. Gagnon currently serves as Chairman of the Ad Hoc Committee on Constitution and By-laws of the North Carolina Pharmaceutical Association.

SCHERING ANNOUNCES "ASK YOUR PHARMACIST" CAMPAIGN

To encourage people to take advantage of a vital aspect of this country's health-care system, Schering Corporation is launching a multi-million dollar public-service campaign entitled, "Ask Your Pharmacist," the firm announced at a press conference in New York City. Schering has budgeted \$4 million for the campaign for 1984; that commitment will be increased substantially in 1985.

"The growing trend toward self-diagnosis and self-medication means the pharmacist's role in advising consumers has never been more essential," according to Lodewijk de Vink, vice president of the Kenilworth, N. J. pharmaceutical firm. "Escalating health-care costs and an increasing number of conversions of prescription drugs to over-the-counter (OTC) status have contributed to the public's desire to self-treat," he said. "Addressing ourselves to that need, we are rolling out the national 'Ask Your Pharmacist'

program to encourage people to look to one of our best health resources—the pharmacist—when they have questions regarding medications."

Also speaking at the press conference, held at the Rainbow Room in midtown Manhattan, were Henry Palmer, Ph.D., assistant dean for clinical affairs at the University of Connecticut's School of Pharmacy, and Richard Penna, vice president of the American Pharmaceutical Association. Palmer, a consultant to Schering for the "Ask Your Pharmacist" campaign, will be touring the country throughout 1984, educating the public about why and how to ask their pharmacists for advice on health-care questions.

Primary components of the campaign are consumer advertising via magazine and radio, in-store displays and a direct-mail package for pharmacists. The materials pose the question, "Where do you get your information about medication?" Supporting materials encourage the public to consult their pharmacist.

PROVEN. For the High Volume Store

Since 1977, pharmacists have depended on QS/1 software and the IBM Series/1 computer to handle their stores' needs.

Backed by decades of experience in both pharmacy and data processing, QS/1 and its nationwide network of trained, dependable representatives provide the total pharmacy system for the larger pharmacy.

With QS/1, pharmacists handle prescription filling, price updates, accounts receivable, third parties, nursing homes, and more, efficiently and effectively.

For more information about how QS/1's Series/1 pharmacy system can help the over 100 Rx per day pharmacy, call toll free 1-800-845-7558 today.

Yes, I want to know more about how a QS/1 Pharmacy System can help me save time & money.

☐ Have someone contact me today.

☐ Rush me more information

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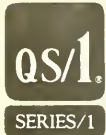
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The "Ask Your Pharmacist" rollout will begin immediately with advertisements slated for placement in editions of *Good Housekeeping*, *Newsweek*, *Health*, *People*, *Reader's Digest* and other consumer publications east of the Mississippi River, beginning with the January 23 issue of *People*. Also kicking off this month is an extensive radio campaign featuring three 60-second radio spots for airing in the targeted region throughout 1984. The advertising campaigns will be fully national by early 1985, de Vink said.

The program is an expansion of a 1983 trial program in several northeastern states. "Reaction to the trial was so overwhelmingly positive," he said, "that we decided to take the program nationwide."

Print and radio advertising campaigns will tell the public about their pharmacists' qualifications and role as an informational source about both prescription and non-prescription products.

Concurrently, Schering will be sending

promotional kits to pharmacists—22,200 in 1984 and 56,000 in 1985—across the country. The kits include in-store displays, posters, shelf-talkers and give-away brochures answering typical questions pharmacists are qualified to answer, such as: "When the label reads, 'Take every four hours,' should I get up in the middle of the night?", "Can I drink alcoholic beverages while on this medication?", "What happens if the label says, 'Shake well,' and I didn't?" and others.

"These are questions that people may not be able to answer on their own," Palmer said. "While I obtain a great deal of satisfaction in my job as an educator in training and preparing pharmacists as health-care specialists, I am often frustrated by a lack of awareness by the public on the value of the pharmacist in this role."

By making the public aware of the guidance their pharmacist can give them, he continued, "we'll be using all of the resources in health care more efficiently."

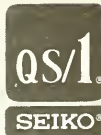
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NE CAROLINA PHARMACEUTICAL SOCIETY

The Northeastern Carolina Pharmaceutical Society held its first 1984 meeting on Wednesday evening, February 8th at Cobb's Restaurant in Williamston, NC with approximately 40 members present. This was the first meeting for the new officers, Wallace Nelson, President, Robert Bowers, Vice President, and William Brown, Secretary-Treas.

After dinner the society discussed passing a resolution for or against endorsement of mandatory continuing education. The group felt more specified details were needed before taking any action thus the issue was tabled until the next meeting. The society will write the Board of Pharmacy and the Pharmaceutical Association to request any specifics which have been discussed to this point.

Concern was again expressed about the status of the Family Practice Center Pharmacy associated with the East Carolina School of Medicine and its dispensing medications purchased on State Contracts to outpatients in competition with area pharmacies. The society has on several occasions during the past year communicated with officials at ECU School of Medicine and with staff at the North Carolina Attorney General's Office with no response noted to have been received. The society will again write the persons with whom we have communicated in the past to solicit a response before we determine our next course of action.

After the above discussed business, an educational program was presented by Dr. William Blakemore, MD, an Edenton, NC Ophthalmologist, on common "Red Eye" problems which may present in a pharmacist's practice. He discussed differentiation of the many different disease processes which cause this problem. He also touched on the many different contact lenses and their many products.

The meeting was then adjourned with the next scheduled meeting to be held on Wednesday evening, April 11th at Cobb's Restaurant in Williamston. The social hour starts at 7 p.m. with the dinner at 8 p.m. The society wishes to invite all pharmacists in the Northeastern part of the state to attend. The

planned program will be on Upper G-I Drugs, antacids to the histamine blockers.

SHELBY

Robbers hit Shelby Drug #2 twice in a two-week period, stealing only controlled drugs in each case. The first incidence took place Wednesday, January 4 and the second occurred Thursday afternoon, January 19. The robber was believed to be the same in both cases. Elavil, Valium, Demerol and Seconal were the drugs demanded by the robber, armed with a large caliber revolver.

ROXBORO

Two armed men robbed the Prescription Shop Thursday, December 1, 1983 about 9:00 p.m. and got away with drugs and cash. The robbers were armed with a shotgun and pistol. They demanded Demerol, Percodan and Valium and took money from the cash register and also took the billfolds of two employees.

MORGANTON

Morganton police reported a clerk at Eckerd Drug Store saw a female take about \$100.00 worth of cosmetics and flee the store. She and a male companion left in a white Chevrolet. This took place Wednesday January 4.

HENDERSON

An armed man took cash and drugs in an unusual robbery at the Henderson Drug Store #2 Monday night, January 9. The robber threatened the pharmacist Randy Wright with a gun and demanded a specific prescription drug and left with the drug in a diaper bag. A few minutes later, the robber returned and demanded cash, and then ran from the store.

DOES YOUR PHARMACIST MAKE HOUSE CALLS?

Reprinted from the *Elkin-Jonesville Tribune*

Count, pour, lick, stick—that's the stereotypical view of a pharmacist at work.

There's only a capsule of truth in that view today.

As the population gets older—projections say by the year 2000, 60 percent of patients receiving drugs will be over 65—the pharmacist's role is changing from pill counter to care giver.

"As time goes on, we'll be involving ourselves more in patients' care at home," Gill Ripley, an Elkin pharmacist and president of the Foothills Pharmacists Association, says.

"We'll be busier trying to educate people—keeping patients healthy is not only the physician's responsibility, but the pharmacist's, too," Ripley says. "Our role has changed."

And the public has noticed the change. In opinion polls, pharmacists rank second only to clergymen in honesty and ethical standards.

Forty years ago, most prescriptions were prepared right in the local apothecary, with the pharmacist mixing his own powders, preparing his own capsules, molding suppositories—he alone was responsible for the drugs' purity and potency.

But by the mid-1950s, drug making shifted from the pharmacist to manufacturers, and the resulting standardization and transfer of responsibility for drug quality altered the pharmacist's role.

Accompanying the shift was a boom in prescriptions written and dispensed. The profession was forced to devote most of its effort to providing drugs, hence the pill-counter moniker.

Ripley says pharmacists generally see patients more frequently than their doctors do. This, plus the limits on physicians' time and burden of keeping up with the deluge of information on new drugs and their uses, place a responsibility on pharmacists to monitor the therapeutic progress of patients.

More and more pharmacists are also offering a variety of home health-care products, such as wheel chairs, hospital beds and specialty equipment. As patients rely on pharmacists for assistance in equipment use, the relationship becomes closer.

"The pharmacist and the physician need to coordinate this (monitoring) role," Dr. Don Fedder, a school of pharmacy professor at the University of Maryland, says.

In a recent issue of *American Health* magazine, Fedder is quoted: "Managing the health of older people calls for sophisticated combinations of drug therapy and device technology," which pharmacists offer.

Locally, most pharmacists already monitor some patients, Ripley says. Four of the six pharmacies in Elkin use chart-monitoring systems.

As customers come in with prescriptions, the pharmacists check their charts to see which medications the patients are using, how often and how effective the drugs are for treatment.

"I could not practice without this information," Ripley says. "It's an additional expense, and it's time-consuming, but it's very important. It's essential for us and important for the patient to know how he's responding to the medication."

Pharmacists review patients' charts, and if there are problems with medications or if the patients stop taking the drug as prescribed, try to find out why, he says.

On occasion, local pharmacists have made house calls, and in the future may do more of it. "Periodic house calls to elderly shut-in patients" would help because most people, especially most older people, "don't want to take medicine to begin with," Ripley says.

With some drugs, a sudden lapse in dosage can bring on serious, even fatal, effects, so the educational process is a vital one.

We can also expect to see more pharmacists involved in awareness programs in the community. The local association plans a community-wide campaign on how to handle and prevent poisonings, Ripley says.

As patients have become more knowledgeable and seek pharmacists' advice, doctors' attitudes toward pharmacists have also changed.

"Primarily, the younger physicians who have had more contact with pharmacists while training," see the pharmacist as a care giver, Ripley says. Older physicians tend to hold with the stereotypical view.

Count, pour, lick, stick—yes, but the pill counter is more: scientist, educator, merchant and adviser.



Photo by Terry Ketron

JOE MILLER—ARTIST IN RESIDENCE

Joe Miller, noted Boone pharmacist, importer and expert in mountain lore, has just completed a very successful exposition of his watercolors in the art gallery above his pharmacy.

Exhibited along with Miller's works were watercolors by Appalachian State University professors Bob Jones and Noyes Long. Miller was pleased with the reception to his paintings, of which 27 out of 33 works were sold. The gallery opened Sunday, December 4.

TOP 20 PRODUCTS 1983 RETAIL SALES

1. Tagamet—SK&F
2. Inderal—Ayerst
3. Dyazide—SK&F
4. Motrin—Upjohn
5. Aldomet—MS&D
6. Valium—MS&D
7. Feldene—Pfizer
8. Keflex—Lilly
9. Naprosyn—Syntex
10. Diabenese—Pfizer
11. Ortho-Novum—Ortho
12. Clinoril—MS&D
13. Indocin—MS&D
14. Tenormin—Stuart
15. Lo/Ovral—Wyeth
16. Procardia—Pfizer
17. Lopressor—Geigy
18. Lasix—Hoechst
19. Darvocet-N—Lilly
20. Minipress—Pfizer

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2. SK&F
3. Pfizer
4. Upjohn
5. Roche
6. Ayerst
7. Wyeth
8. Parke-Davis
9. Squibb
10. Lilly
11. Syntex
12. Abbott
13. Ciba
14. Searle
15. Ortho
16. Burroughs Wellcome
17. Dista
18. Lederle
19. Geigy
20. Schering

Listings are based on data compiled by McKesson's Pharmaceutical Data Services and reflects acquisition cost.

BIRTHS

Aaron Patrick Webb was born November 28, 1983, in Memorial Mission Hospital, Asheville, to proud parents *Julie* and *Ed Webb*. Aaron weighed eight pounds one ounce. Ed is AHEC pharmacist in the Mountain AHEC and Julie was on the staff of Margaret Pardee Hospital in Hendersonville.

Jim and *Janice Utt*, Knoxville, Tennessee, announce the birth of Emily Elizabeth Utt, weighing 7 pounds, 4¾ ounces, January 26, 1984. Jim is employed in the Department of Pharmacy Services, University of Tennessee Hospital and is editor of *DRUGS-80*, a drug information newsletter.

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The *Carolina Journal of Pharmacy* welcomes letters from its readers and will publish those meeting certain criteria with the authorization of the writers. Letters should be to the point and preferably typewritten. Letters of more than 350 words may be edited. The name of the writer will be published unless otherwise requested. Letters should be sent to *The Carolina Journal of Pharmacy*, P.O. Box 151, Chapel Hill 27514.

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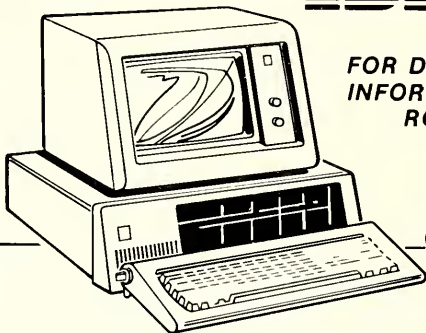
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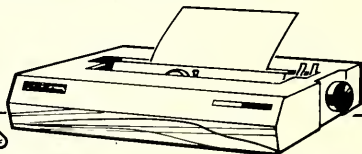


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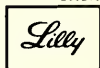
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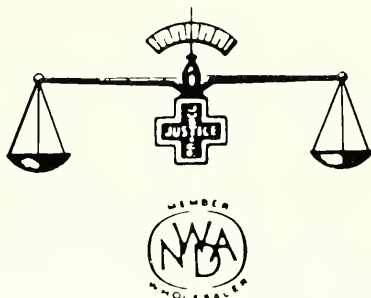
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MEDICATION FOR THE ELDERLY: ISSUES AND ANSWERS

People over the age of 65 constitute the fastest-growing segment of the American population, both in numbers and in proportion to the rest of the population. Although health care for the elderly has never been more comprehensive, a significant number of older Americans suffer from misuse of medications.

More than half of all elderly Americans require at least one medication a day and many take six or more medications daily, often with insufficient information about the drugs they are taking and how they should use them. Without clear information on the factors that affect drug use, the ways drugs can interact with one another, and the potential side effects of certain medications, the elderly risk serious, even deadly, consequences.

Drugs themselves are not at issue; medical science has achieved extraordinary progress in developing effective remedies for a wide range of ailments. The problem, rather, is one of communication. Until the elderly know where to go for assistance—and overcome a reluctance to take advantage of such resources—and until the entire health care community is sensitive to the information gap that often exists, older patients will continue to jeopardize their health even as they attempt to maintain it.

Demographics

Statistically, the American population is growing older and the trend is accelerating. In 1900, four percent of the nation was over the age of 65. By 1970, the figure had grown to 10 percent; it has now reached 11.4 percent and by the year 2000, one quarter of the population will consist of the older age group. By the end of the century, some 30 million Americans will be over 65 and the number of people over the age of 75 will increase by 60 percent.

Fully 95 percent of today's elderly live at home, not in nursing homes or special care facilities. Although some 68 percent of those over 65 live in metropolitan areas, the rural elderly population grew twice as fast during the 1970s as the urban population. In both cities and rural areas, many of the elderly are isolated, with little access to medical

facilities and few neighbors or relatives to provide help.

Drugs and the Elderly: Problems and Risks

People over 65 (11 percent of the population) account for 38 percent of the medications purchased today. A study completed in 1979 showed that the elderly who use medications average 18 prescriptions a year, and the number and sizes of those prescriptions are increasing steadily.

As people grow older, they are more likely to experience adverse drug reactions and side effects, especially those who take more than one medication. Because many elderly suffer from a number of chronic conditions, and because both the use of over-the-counter and prescription drugs is proliferating, the need for accurate information about taking multiple medications is acute. Diuretics, drugs for hypertension and Parkinsons disease, and a number of other commonly prescribed medications can cause side effects that users should be aware of. Even simple remedies such as over-the-counter vitamin supplements or antihistamines can interact badly with other drugs taken by the elderly. Aspirin can exaggerate the effects of anti-coagulants, and eye drops can cause problems for asthmatics. Caffeine and alcohol pose additional risks for people taking certain medications or having certain disabilities.

The effects of drugs are also less predictable among the elderly than among younger users. Bodies age at different rates, body composition changes, and the cumulative effects of various ailments in combination with the primary effects of aging make drug action less reliable. As people age, changes in their eating and exercise habits also affect the way they react to medications.

Poor nutrition among many older people complicates drug treatment. Over 60 percent of elderly patients admitted to hospitals are found to be malnourished. In addition to slowing down the healing process, malnourishment alters organ functions and changes the way the body responds to antibiotics and other drugs.

Physical disabilities, even of a minor character, often interfere with the proper use of medication. Impaired vision and hearing make it difficult for some patients to understand

instructions. Color-blindness may make it difficult to distinguish one pill from another. Other physical limitations may interfere with the ability to open a child-proof package. Social isolation sometimes causes extreme shyness, making the older person less likely to ask questions.

The Need for Information

Surveys have repeatedly shown that when older patients—or patients of any age—understand how to take medications properly, problems decrease.

How much do the elderly know about the drugs they are taking? Not nearly enough. In a study conducted by the Food and Drug Administration, only 58 percent of the respondents said their doctors discussed how much of their medications to take, and only 33 percent were told about side effects.

Even among those receiving complete instructions, patients often had difficulty understanding or remembering precise dosages, identifying warning signals, and recognizing possible side effects; many were reluctant, even afraid, to “bother” doctors for fuller explanations.

Trained health care specialists who can make sure that a doctor's instructions are followed are available in most communities, but the elderly need to be aware of these resources. At the same time, these specialists need to devote sufficient attention to meeting the specific concerns and limitations of the elderly. Neighborhood pharmacists, for example, can offer valuable assistance in advising older consumers on correct procedures for taking medications. Pharmacists often have easier access to doctors than do patients, and can confirm or clarify instructions quickly. Nurses, dentists, social workers, and other professionals may also be able to assist the elderly, provided that older patients recognize their potential problems and assert themselves by asking questions.

Elder-Care: One Solution

In an effort to make health care professionals more responsive to the information needs of the elderly, and to help them deal more effectively with the communications problems involved, the Parke-Davis Division of Warner-Lambert Company is initiating a nationwide effort emphasizing the pharmacist's role in care of the elderly. While

the Elder-Care program is also concerned with making the consumer more aware of the expertise available among pharmacists, it advises pharmacists to respond sensitively to the needs of older customers—even to the extent of monitoring the customer's drug requirements.

In a variety of ways, the program encourages senior citizens to seek guidance from pharmacists, stressing that they are specially trained to help with medications. A consumer brochure discusses the managing of medications. Included is a form for patients to keep track of medications they use.

In a broad context, Elder-Care is an attempt to break down barriers and to alert everyone—young and old alike—that as we grow older we need someone to help us get the most from life. Such sensitizing is particularly important as more and more of the population continues to age.

Parke-Davis also supports programs at the University of Maryland and the Rutgers College of Pharmacy, in which students and retired pharmacists speak to older community groups on such subjects as drug interaction, nutrition, over-the-counter medications, and the need for elderly patients to be more assertive in obtaining information from health care professionals.

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(Continued on page 8)

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GLAXO INC. NAMES WILLIAM H. EDMONDSON, Ph.D. NEW DIRECTOR OF CORPORATE AFFAIRS

Research Triangle Park, NC—William H. Edmondson, Ph.D., was named Director of Corporate Affairs for Glaxo Inc. located in Research Triangle Park, NC.

Dr. Edmondson joins Glaxo Inc. after serving as Director of Government Affairs for Burroughs Wellcome Co. He has a B.S. in pharmacy, a background in computer systems design, a M.A. from the University of Southern California School of Medicine and a Ph.D. from the University of Maryland. He has worked as a pharmacist and as an educator.

Glaxo Inc. is the newest member of the British-based Glaxo Group and has estab-

lished U.S. headquarters in Research Triangle Park, NC. Glaxo Inc. researches, develops and manufactures human pharmaceutical products and has introduced important new drugs to treat asthma and ulcers. The Glaxo Group is comprised of more than 2,000 scientists and employs over 30,000 people in 40 countries.

From the new headquarters in Research Triangle Park, Dr. Edmondson will be responsible for recommending policies and implementing programs to guide the company in its relations with government, consumers and employees.

Dr. Edmondson and his wife and two children reside in Durham, NC.

VIAL OF LIFE

The Vial of Life project sponsored by the Woman's Auxiliary of the NCPHA is in its second year of activity. Participation has been good; approximately 250 stores and organizations have received supplies and many have used the slide presentation. Donations of approximately \$1500 have been received to help defray the costs of the project. We are grateful to the NCPHA members who are involved in this project and encourage and solicit the support of many more of you. We feel this is a superior pharmacy-related community service and as evidenced by your participation, we know that you share those feelings. Thank you for your support—past, present and future.

To quote Ernie Rabil, past president NCPHA, "Life is Vital!" Say yes to the Vial of Life.

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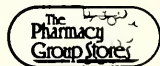
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THE GUILFORD COUNTY SOCIETY OF PHARMACISTS

The February meeting of the Guilford County Society of Pharmacists was held on Sunday, Feb. 12, 1984 at the Executive Inn in downtown Greensboro. Following a social hour and dinner that was enjoyed by everyone present, the evening's speaker was introduced by Tim Rice, VP/Program Chairman. Mr. Mike Slawter, a financial planner with his own firm in Greensboro, led a very interesting and informative discussion of what financial planning can do for an individual or company, and when one should consider whether they are a candidate for this type of service.

A brief business session followed the program, at which it was decided to continue the dinner meeting format again in March in light of the increased attendance at this meeting and the positive response from many who were in favor of the change, but unable to attend on this particular Sunday evening. There being no further business, the meeting was adjourned by President Marilyn McConnell.

J. Frank Burton, Sec.-Tres.

CHARLOTTE WOMAN'S PHARMACEUTICAL AUXILIARY

The Charlotte Woman's Pharmaceutical Auxiliary met February 14th at the Ramada Inn, 600 South King's Drive, Charlotte.

The program was given by member, Mrs. Cindy Oxendine. She is a Fashion Co-ordinator for the American Business & Fashion Institute in Charlotte. She told members how to arrange and match their clothes using only a few outfits. Everyone enjoyed the many fashion tips.

Mrs. Jewell Oxendine presented the auxiliary a check in the amount of \$405.00 from the sale of Christmas trees last December.

In March the auxiliary will hold its Annual Fun Day in the home of Dollie Corwin. Special guest will be Mary Good, state president.

In closing a memorium was given by Mrs. Mary M. Smith for Mae Dixon, a charter member who died in January 1984.

Mrs. Billie Dagenhart
Corresponding Secretary

HARNETT COUNTY

The Harnett County Pharmaceutical Association had its first meeting of the year in Dunn on Tuesday, March 6, 1984 at the Western Steer Family Steak House. The new president, Gary Phillips of Angier, presided.

Joni Berry, a pharmacist from the Wake AHEC presented an interesting program on "Drug Use in the Elderly", accentuating her talk with informative slides, and printed hand-outs.

The group was pleased to have a new member—Charles Tingen, who has moved from Hickory to Dunn, and works in the Pharmacy at Betsy Johnson Memorial Hospital. Others present for this meeting were Kim Allen, Caul Jernigan, Larry Thomas, J. I. Thomas, and Sharon Williams of Dunn; I. J. Pruett of Angier; and Edith Ann Caviness and Bill Randall of Lillington.

Amy Northrup and Joni Berri are presenting a program on "New Cardiovascular Drugs" at a breakfast during the 35th Annual Meeting & Scientific Sessions of the North Carolina Affiliate of the American Heart Association, June 22 & 23, 1984, Sheraton University Center, Durham.

WINSTON-SALEM

Priscilla C. Brown, Germanton, has been elected to the Board of Pharmaceutical Specialties by the Board of Trustees of the American Pharmaceutical Association. The BPS recognizes appropriate pharmacy practice specialties and establishes standards for certification, and is composed of pharmacists, other health professionals and a public member. The BPS will meet at the APHA meeting in Montreal May 5-10, 1984.

Brown is a 1973 graduate of the University of North Carolina School of Pharmacy and is employed by K-Mart Pharmacy in Winston-Salem.

STATE BOARD OF PHARMACY

Members—W. R. Adams, Jr., Wilson; Harold V. Day, Spruce Pine; W. Whitaker Moose, Mount Pleasant; W. H. Randall, Lillington; Evelyn P. Lloyd, Hillsborough; David R. Work, Executive Director, P. O. Box H, Carrboro, NC 27510

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BOARD OF PHARMACY MOVES. The NC Board of Pharmacy has moved from its location in Carr Mill Mall in Carrboro to larger offices in the Willow Creek Shopping Center, also in Carrboro. The mailing address (P.O. Box H, Carrboro, NC 27510) and the telephone number (919 942-4454) have not changed. The Willow Creek Shopping Center is at the intersection of Jones Ferry Road and NC 54 Bypass. The entrance to the shopping center is on Jones Ferry Road. The Board offices are next to Kerr Drug Store.

NEW ORLEANS 1984 WORLD'S FAIR AND CONTINUING EDUCATION

Pharmacists planning to attend the Louisiana World Exposition—the 1984 World's Fair—from May 12 through November 11, will want to take advantage of an exciting and informative series of continuing education programs developed and sponsored by the Louisiana Pharmacists Association.

The LPA will provide two CE seminars each month during the course of the Fair and these programs are designed to let Fair visitors claim a tax deduction for expenses incurred, up to limits set by the Internal Revenue Service. Accommodation arrangements for the Fair and CE programs at the new Sheraton New Orleans on Canal Street, just across from the historic French Quarter, can be made by contacting the Louisiana Pharmacists Association, 2337 St. Claude Avenue, New Orleans, LA, 70117. Telephone (504) 949-7545. A complete schedule of seminar title, faculty and dates, and a preregistration packet is available on request.



Meet Dr. Bob

Dr. Bob Singiser was awarded his Ph.D. in Pharmacy from the University of Connecticut in 1959, shortly after joining Abbott as a Research Pharmacist. He became Vice President of Scientific Affairs of the Pharmaceutical Products Division in 1970.

HE KNOWS BOTH SIDES OF THE BENCH

As head of our divisional product development operation, Dr. Bob Singiser will tell you that meeting compendial specs is sometimes just the beginning of the job.

He knows that things like flavor, tablet size, stability, and odor (or lack of it) can be critical to patient compliance. That's why he and his people are always striving for the "leading edge" in formulation technology.

But Bob's commitment isn't confined to our side of the bench. He is very active in local and national pharmacy activities. You'll often find him lining up speakers for pharmacy school or association meetings. Or coordinating a student internship program (we had six students with us last summer). Or setting up a visiting professor program for pharmacy school faculty members.

This isn't written into his job description here at Abbott. It's something he chooses to do. And when the administrative work begins to pile up, he's apt to remind us, "Hey guys, remember—I'm a pharmacist."

As though we'd ever forget.



CORRESPONDENCE COURSE

Self Medication of Topical Bacterial Infections

By J. Richard Wuest, R.Ph., Pharm, D.

Professor of Clinical Pharmacy

University of Cincinnati

Cincinnati, OH and Thomas A. Gossel, R. Ph., Ph.D.

Professor of Pharmacology

Ohio Northern University

Ada, OH

Goals

The goals of this lesson are to:

1. Discuss the self-treatment of topical bacterial infections.
2. Review the pharmacology and therapeutics of drugs used to treat topical bacterial infections.

Objectives

At the completion of this lesson, the successful participant will be able to:

1. Choose the appropriate OTC agent for treating topical bacterial infections.
2. Properly advise consumers on the selection and use of OTC dermatological agents.
3. Decide when the consumer should be referred to a specialist.

Each of us lives in an environment where we are surrounded by countless microorganisms. Some are pathogenic while others are benign. Some cause life-threatening diseases, and others are needed for life to properly continue. This latter group serves numerous useful purposes including production of some vitamins and foods; ecological destruction of substances that would otherwise not be biodegradable; proper digestion and putrefication of the food we eat (e.g., lactobacilli); production of biologicals, insulin and other life-saving drugs; and possibly, in the near future, production of prostaglandins and energy.

Protection against pathogenic bacteria, that cause disease should they gain access to the systemic blood supply and internal organs, is provided to a large degree by the epithelial tissue (i.e., the mucous membranes of the alimentary canal and the skin).

A number of organisms can, should conditions be right for them, infect the skin. If allowed to multiply unheeded, they can gain

access to the internal organs. Paramount among these are staphylococci, streptococci, and pseudomonas. Normally, the skin is an adequate barrier to these organisms due to its physical nature, its slightly acidic pH, and the normal flora of nonpathogenic organisms that reside there.

The many layers of "dead" keratin cells (stratum corneum) not only help hold the body together and prevent leakage of its contents, but also prevent outside materials from gaining entrance. The stratum corneum is not conducive to bacterial growth since it usually contains less than ten percent water. However, if the skin is macerated with large and continuous amounts of water, if it is occluded so that water accumulates, or, if it is injured in such a way that bacteria can invade, infection is quite likely.

The acid "mantle" of the skin is also thought to impede bacterial infection. In the normal person, the skin's surface is slightly acidic, normally between pH 4.5 and 5.5. This is due to sweat and secretions from the sebaceous glands that deposit fatty acids on the skin's surface. Since most microbes opti-

(Continued on page 16)



This continuing education for Pharmacy article is provided through a grant from
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Bacterial Infections

mally grow at a higher (more alkaline) pH, their growth is inhibited. Herein lies another example of nonpathogenic microorganisms being useful for prevention of invasion by those that are pathogenic. Propionibacteria (formerly called corynebacteria), which are normal inhabitants of the skin and environment, thrive on sebum. They convert this lipid material into the fatty acids that are both bactericidal and fungicidal. They, and other bacteria, help remove waste products from the skin by metabolizing them and breaking them down, thus converting these body by-products into smaller particles that can be washed away. It should be pointed out, however, (and it will be discussed in detail in a later lesson) that these normally nonpathogenic organisms can be contributory to severe acne if sebum production becomes excessive and the pilosebaceous ducts (pores) become plugged up.

The propionibacteria and other nonpathogenic organisms that reside on the skin also prevent the overgrowth of pathogenic bacteria there by successfully competing with them for nutrition and space. One point to keep in mind is that these helpful organisms can be removed by excessive washing with strong detergents or with "antibacterial" soaps, thus leaving the skin open to infection by more serious pathogenic bacteria. This will be discussed further.

Bacterial Infections Of The Skin

The bacterial infections that have traditionally been considered to be self-treatable without medical supervision are those that result from minor skin cuts, abrasions, and burns. Another group that lies on the borderline between being safe for self treatment and requiring medical supervision are the mild pyodermas.

A **pyoderma** is a bacterial infection that leads to formation of pus in the skin. It is of some interest to note that **pus** is not a bacterial coloni. Instead, it consists of white blood cells (leukocytes) and debris of dead cells and tissue elements which have been liquified by proteolytic enzymes during the normal inflammatory response. The most common of these pyodermas are impetigo, folliculitis, furuncles, and carbuncles.

Impetigo is generally subdivided into two groups depending on whether the major infective organism is streptococcal or staphylococcal. The streptococcal variety is referred to as nonbullous (**impetigo contagiosa**). As the name implies, this variety is extremely contagious but is usually benign and self limiting. It can, however, in approximately one percent of all individuals who contract it, lead to a systemic infection resulting in severe kidney damage. Poor hygiene, overcrowding, and warm, moist climates increase the occurrence and spread of impetigo.

Traumatic damage to the skin usually gets it started because streptococci do not easily penetrate intact skin. The trauma that allows entry of these bacteria includes insect bites, poison ivy and oak, small cuts, or intense scratching of the skin's surface. It should be pointed out that the streptococcal strain which causes impetigo is totally different than the one that causes "strep" throat.

Impetigo contagiosa begins as a small red spot which rapidly develops into blisters. These then fill with yellow fluid and rupture. Some will dry and form a crust. The infection spreads with the fluid that contaminates other parts of the body or other persons. This condition is referred to as a pyoderma because pus will often form in the blister and, upon rupturing, will add to the crusty material that forms.

The other type of impetigo that is caused by staphylococci is referred to as **bullous impetigo**. It does not occur as frequently as does the impetigo contagiosa, and it does not spread as easily. This form looks pretty much like the streptococcal type, except that the blisters are much larger and not as much pus is formed. The crusty material is also more varnish-like in appearance than granular. We will discuss treatment of impetigo contagiosa shortly, but would like to point out at this time that since the bullous variety is caused by staphylococci, penicillin VK is not effective in its eradication. This form requires treatment with a penicillinase-resistant penicillin (e.g., Tegopen®, Prosthaphlin®, etc.) or erythromycin.

Folliculitis is a pyoderma infection that occurs around the hair follicles. It is caused by staphylococci that have entered that area, and, due to conditions being right, are able to rapidly grow and multiply. The condition

looks similar to severe pustular acne.

Furuncles, more commonly referred to as boils, are also caused by staphylococci. They occur most frequently on hairy skin that is subject to friction or maceration. The affected area becomes softened due to occlusion and sweating. The neck area is a common site of boil formation. Boils are differentiated from carbuncles in that a boil has a central core from which the exudate is discharged.

Carbuncles, on the other hand, are much larger and deeper than boils. They develop in thick, nonelastic skin—most commonly the neck, back and thighs. Carbuncles drain at multiple sites rather than through a central core. They are also caused by staphylococci organisms.

Treatment of Pyodermas

Since **impetigo contagiosa** is the most commonly encountered form of pyoderma, we will discuss it in more detail than the others. Medical science considers topical antibiotics to be ineffective in the treatment of impetigo contagiosa and suggests early referral of the individual to a physician. The opinion is held that this will reduce the duration of infection and the chance of spread to others. While impetigo is a mild disease, it may take six to eight weeks to clear on its own and frequent reinfection or spread to other persons is likely.

The treatment of choice of impetigo contagiosa is penicillin VK for a ten-day course of therapy. Erythromycin, cephalosporins, and clindamycin are alternatives to penicillin VK. If the condition is severe, widespread, or if there is a problem with compliance, benzathine penicillin (Bi-Cillin®) is the treatment of choice. Procaine penicillin does not give high enough blood levels for a long enough period of time. The contemporary conservative view is that topical antibiotics are not only no more effective than placebo, but may actually result in a slower healing rate and continued development of new lesions.

The other more liberal opinion is that while topical antibiotics are not the treatment of choice for impetigo, a considerable number of the persons most likely to be infected, the indigent, are unable or unwilling to see a physician and obtain a prescription. Many of these people are even less likely to take their children to the doctor. This group also has the highest incidence of

kidney damage due to untreated impetigo. It is interesting to note that the OTC Advisory Panel on Topical Antibiotics agreed with the "liberal" view and felt that the potential risk is serious enough to consider and evaluate impetigo as an OTC indication for topical antibiotics even though their effectiveness has not yet been proven.

In any case, it is important to assure that parents understand that the impetigo lesions must be carefully cleaned. This is best accomplished by gently washing off the crusty material with nonirritating soap. The more advanced lesions would require soaking in warm water, saline or soap solution for fifteen to twenty minutes, three to four times a day for their removal. Fluid from the blisters and under the crusts must be absorbed onto some material such as facial tissue or toilet paper and discarded carefully. As stated earlier, the infective organisms will be present in these fluids and the impetigo can spread to others. Some physicians advise applying a bland ointment to the cleaned lesion after the crust has been removed to prevent entry of foreign materials and additional bacteria. When the condition is extensive or does not clear after seven to fourteen days, the parent should be urged to take the child to a physician because of possible systemic complications.

Topical Antibiotics Available Over The Counter

These agents are listed in Table 1. Those that are currently considered to be safe and effective for OTC use by the FDA include bacitracin, neomycin, polymyxin, and the tetracyclines. Its advisory panel has ruled that gramacidin requires further study before it can be so designated.

TABLE 1
Currently Marketed OTC
Topical Antibiotics

Bacitracin*
Chlortetracycline
Gramacidin*#
Neomycin*
Oxytetracycline
Polymyxin B*
Tetracycline

*Also available in combination products

#Evidence of effectiveness lacking

(Continued on page 18)

Bacterial Infections

Bacitracin is a bactericidal antibiotic that acts by preventing proper synthesis of bacterial cell membranes. Its spectrum of activity is quite similar to penicillin (i.e. mainly gram-positive with a few gram-negative bacteria sensitive to it), but it has never shown the degree of hypersensitivity that the penicillins have. It is recommended that bacitracin be used with polymyxin, neomycin or both for optimal range of activity.

Neomycin is a relatively broad-spectrum antibiotic and a member of the aminoglycoside group. These agents act by a number of mechanisms including interference with cell wall development, bacterial enzyme activity, and intracellular respiration. Since some normally susceptible organisms (including the staphylococci) may develop resistance to neomycin, it is generally used in combination with either polymyxin, bacitracin, or both, to prevent this occurrence.

Polymyxin B is an antibiotic that is ef-

fective mainly against gram-negative organisms. It acts by a detergent mechanism—on entry into the membrane of susceptible organisms, it breaks down the linkage between the lipid-protein-lipid structure and causes the organism to burst. Its spectrum is limited to gram-negative organisms. Since gram-positive organisms are so prevalent in dermatological infections, polymyxin is not considered to be an adequate antibacterial agent when used by itself. Most commonly it is combined with bacitracin which broadens the spectrum of the combination significantly.

The **tetracyclines** are broad-spectrum antibiotics effective against both gram-positive and gram-negative organisms. They act by interfering with enzymatic activity within susceptible organisms and preventing their growth and reproduction. Because the tetracyclines are bacteristatic rather than bactericidal, and because of the development of a high degree of resistance by gram-positive strains, their topical usage has dropped off considerably in recent years.

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similar to bacitracin. There is no doubt that it is effective. The problem is that it has never been studied adequately for use by itself. All studies of gramacidin have been with products in which it is included as an ingredient of a combination (e.g. Mycolog®). While there is no overt evidence of toxicity when used topically, gramacidin is a potent hemolytic agent that can cause destruction of red blood cells. The FDA review panel has suggested that toxicity studies be conducted before approving it as a Category I (safe and effective) OTC antibiotic.

Findings of the FDA Advisory Panel on OTC Topical Antibiotics

This panel reported that OTC topical antibiotics should be used only as part of first aid treatment of small superficial wounds such as cuts, abrasions and burns. It made a major issue of the fact that, before any self medication of a minor wound begins, gentle, thorough cleansing of that wound is the important first step to remove any debris or bacteria that may be present. The panel found that application of antibiotic ointments to small wounds acts as a protective barrier against further contamination and helps prevent microbial proliferation. However, it found that there was insufficient data to prove that topical antibiotics are effective in treating infections of small cut wounds or abrasions and that such use requires more study before a final ruling can be made. Since this report, FDA has ruled that **treatment** of infections is not an OTC indication and it will not allow manufacturers to make such claims. It should be kept in mind that FDA's authority only extends to the manufacturer and its labeling. It does not affect physicians and pharmacists.

Therefore, the previous discussion of whether topical antibiotics are proper for impetigo requires some explanation. While manufacturers may not indicate their products for impetigo, physicians can certainly prescribe, and, pharmacists can recommend their use—within the limits of good professional judgment.

It is beyond the scope of this lesson to delve too deeply into the legal-medical aspects of professional judgment. However, it is the opinion of the authors that pharmacists are acting reasonably and prudently if they contact several pediatricians in their area

and ask for opinions on recommending the use of topical antibiotics for mild, uncomplicated impetigo. Part of the discussion should include the understanding that, when a case of obvious prolific infection is seen, the patient will be referred to the physician. The results of this consultation will direct the pharmacists in dealing with persons requesting advice on impetigo.

The FDA's advisory panel reported that chronic OTC application of topical antibiotics, especially to areas where systemic absorption is probable, should be avoided. The panel specifically pointed out that antibiotic use on diaper rash, extensive heat rash, large burns, and open ulcers should be discouraged. The FDA has agreed with this and will require that the following warning be placed on all OTC topical antibiotic products: "Do not use in the eyes or apply over large areas of the body. In case of deep or puncture wounds, animal bites or serious burns, consult a doctor." The same advice is necessary for redness, irritation, swelling or pain. If they persist or increase, the consumer should discontinue use and consult a doctor. One final warning is "Do not use longer than one week unless directed by a

(Continued on page 21)

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Bacterial Infections

doctor". Certainly, if the condition has not cleared up by then, medical supervision is needed.

Another point of interest is that the FDA OTC advisory panel that reviewed boil remedies concluded that self treatment is not desirable because improper treatment or delay in receiving proper treatment may cause the infection to spread. The panel stated that "drawing salves" have no merit in treatment of boils, and, that moist heat is an effective means of bringing the boil to a head. Sometimes the boil will then drain spontaneously. Recurrent boils require systemic treatment with the appropriate antibiotic (since *Staphylococcus aureus* is the most common infective organism, a penicillin-resistant antibiotic is indicated). The panel suggested that the currently used agents listed in Table 2 should be considered mislabeled if they are labeled, represented, or promoted for external use as boil remedies until their manufacturers conduct studies to prove them safe and effective. Since FDA has not made its final ruling on this recommendation, these products can remain on the market in the interim.

Other OTC Antimicrobials

Numerous other antimicrobial agents have been used for years (phenol was used as a germicide by Lister over a century ago). This group includes the quaternary ammonium compounds (QAC), iodine and the iodophors, phenol and its derivatives, the mercury-containing compounds, alcohol, and several chemically synthesized agents. The categories of these agents in current use are listed in Table 3.

TABLE 2
Active Ingredients In Currently
Marketed Boil Remedies

Benzocaine
Camphor
Ichthammol
Juniper tar
Magnesium sulfate
Phenol
Rosin
Thymol

Quaternary Ammonium Compounds (QAC)

These agents have been in common use as antiseptics and disinfectants since the mid-1930's. They are referred to as surface active agents, but a more appropriate term would be "membrane" active. They enter susceptible organisms and affect membrane permeability leading to the loss or leakage of cell contents. Gram-positive microorganisms are considerably more susceptible to the effect of QAC's than gram-negative ones. Their most serious drawback is that they may leave the area open to invasion by non-susceptible pseudomonas organisms. At very high concentrations, the QAC's can inhibit or kill pseudomonas but the concentrations required are so high that they are very irritating and therefore not desirable for use on the skin.

It is generally held that the microbial spectrum of QAC's does not vary significantly from compound to compound. Benzethonium (e.g., Phemerol®) and cetylpyridinium (e.g., Ceepryn®) are members of the group, but benzalkonium (Zephiran®) has become the most commonly used agent. In its deliberations, the OTC advisory panel did find convincing evidence that these agents are safe and effective as skin wound cleansers. However, there was insufficient evidence to convince the panel that QAC's are effective as antiseptics or any of the other categories listed in Table 3.

TABLE 3
OTC Antimicrobial Product
Categories*

Skin Antiseptic: A non-irritating, antimicrobial-containing preparation which prevents overt skin infection.

Patient Pre-Operative Skin Preparation: A fast acting, broadspectrum antimicrobial-containing preparation that significantly reduces the number of microorganisms on intact skin.

Surgical Hand Scrub: A non-irritating antimicrobial-containing preparation that significantly reduces the number of microorganisms on the intact skin. A surgical hand scrub should be broad-spectrum, fast-acting and persistent.

Health-Care Personnel Handwash: A non-irritating preparation designed for fre-

(Continued on page 22)

BACTERIAL INFECTIONS

quent use, which reduces the number of transient microorganisms on intact skin to an initial baseline level after adequate washing, rinsing and drying. If the preparation contains an antimicrobial agent, it should be broad-spectrum, fast-acting, and if possible, persistent.

Skin Wound Cleanser: A non-irritating liquid preparation (or product to be used with water) that assists in the removal of foreign material from small superficial wounds; does not delay wound healing; may contain an antimicrobial ingredient.

First Aid Antibiotics: A non-irritating preparation applied to small cleansed wounds. It provides a protective physical barrier and a chemical (antimicrobial) barrier that neither delays healing nor favors the growth of microorganisms.

Antimicrobial Soap: A soap containing an active ingredient with *in vitro* and *in vivo* activity against skin microorganisms.

*defined by FDA

Iodine and the Iodophors

Iodine has nearly a century and a half of history of use as an antimicrobial agent. Iodine works by entering susceptible organisms and overloading their ability to handle it. Thus, it becomes lethal to these cells. Elemental iodine is a powerful oxidizing agent and kills the microorganisms due to this action. It is recognized as a broad-spectrum antimicrobial with activity against both gram-positive and gram-negative bacteria as well as fungi and some viruses. The relatively new iodophors contain elemental iodine complexed with carrier molecules that reduce the amount of free iodine, and instead, release it over a period of time. This is claimed to reduce the degree of skin irritation and to provide a longer duration of activity. The antimicrobial activity of all these agents is dependent upon release of elemental iodine.

In the judgement of the OTC advisory panel members, elemental iodine in a hydro-alcoholic solution is safe and effective when properly used on unbroken skin as a pre-operative skin preparation. But, they expressed concern about its irritating properties and that it may actually delay wound healing when placed on broken skin. The

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panel was also concerned that the supposed advantages of complexed iodine in the iodophors may be their most serious disadvantages. The panel pointed out that the advantage of iodophors over elemental iodine is that the area can be treated and bandaged. However, a serious disadvantage is that there may actually be less free iodine available to act as an antimicrobial. The panel reported that the basic questions which have yet to be answered and require more study are, "What is the rate of iodine released from the complex molecule; does it then bind to other materials on the skin; is it thereby inactivated; and, what is the influence of the release rate on the effectiveness of the product?"

Phenol

The germicidal activity of phenol is due to its action as a protein denaturant. Its mechanism of action on susceptible microbes is likely due to its disruption of the cell wall and precipitation of cellular proteins. It has been determined by the FDA OTC advisory panel that phenol, in a concentration greater than 1.5 percent, is toxic to the skin and should be banned from future use. At this strength, phenol penetrates into deeper layers of the skin and can produce severe burns. It might possibly be absorbed systemically with a deleterious effect on the central nervous system. Localized gangrene has also been seen following application of phenol to the skin in higher strengths.

The panel ruled that adequate double blind studies for determining the safety and effectiveness of phenol in aqueous and alcoholic formulations have not been conducted. These studies will be needed before a final ruling can be made and the product made available for OTC use. A similar but less toxic substance, hexylresorcinol, was placed in the safe and effective category (along with the QAC's) as a skin wound cleanser, but in the "needs more study" category for all other topical uses.

Mercury-Containing OTC Topical Products

Mercury has been known to mankind since time immemorial. Many feel that the early days of chemical science developed due to efforts to convert mercury into gold and

silver. Down through the ages, mercury compounds have been used in numerous ways for treating illnesses. Because of its potential for toxicity, the systemic use of mercury compounds is no longer considered to be safe or rational. The use of these agents has continued, however, for minor cuts and scrapes. Most particularly thimerosal (Merthiolate®) and merbromin (Mercurochrome®) have been popular home remedies.

The antimicrobial activity of mercuric ions is due to their combining with free sulfhydryl groups in susceptible bacterial cells and thus depriving these cells of proper metabolism and growth. Mercuric ions inhibit growth of bacteria but do not act swiftly to kill them.

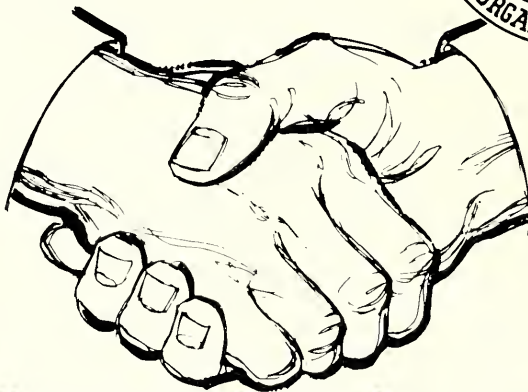
In spite of the widespread popular use of these first aid agents, the FDA advisory panel suggested that FDA ban all mercury compounds from future sale. Among the compounds specifically placed in Category II (i.e., neither safe nor effective) were ammoniated mercury, merbromin, red mercuric sulfide, thimerosal, and yellow mercuric oxide. The basic reasoning behind this finding was that the bacteristatic action of mercury can be reversed by many types of sulfur-containing compounds including those present in serum, pus, and other body fluids. The panel found that, if the mercury-containing compounds are first allowed to combine with the sulfhydryl groups and bacterial cells, growth is inhibited. But the introduction of additional sulfhydryl groups to the cell-mercury complex neutralizes the action and growth again takes place. One interesting study showed that 800 times more merbromin and 14,000 times more thimerosal were required to inactivate half of the *Salmonella typhosa* cells suspended in 10 cc of an eighty percent serum solution, than was required to achieve comparable results when these cells were suspended in saline solution. The panel ruled that a bacteristatic action that is capable of being reversed by contact with body fluids and other organic matter does not constitute an effective topical antimicrobial action. The panel also found evidence that thimerosal is highly allergenic and has a potential for cell damage if it is applied to broken skin. Although placing a red solution on the skin has a psychological effect, a

(Continued on page 25)

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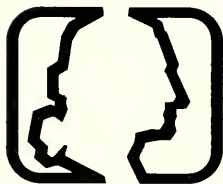
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BACTERIAL INFECTIONS

solution that stains the skin a deep red is not desirable as an antimicrobial agent because it may mask inflammation. Inflammation is an important warning sign of infection.

Alcohol Drug Products For Topical OTC Antimicrobial Use

Both ethyl and isopropyl alcohol are effective topical antimicrobial agents. They are astringents and precipitate protein. Both act by denaturing bacterial protein, in the presence of water, and thus killing the organisms. Because bacteria in a dry environment are more resistant to their bactericidal action than in a moist environment, one hundred percent absolute alcohol is not as effective as alcohol-water mixtures.

The ideal concentration of ethyl alcohol is 65 to 95 percent, and it really doesn't matter which of the intervening strengths are used. The ideal bactericidal strengths of isopropyl alcohol range from 50 to 91 percent.

Neither of these agents is recommended for use on mucous membranes or extensive open skin wounds because they are extremely irritating and may be more harmful than beneficial. Because of the resistance of spores to alcohol, these agents are no longer recommended for use in cold sterilization of surgical equipment or needles and syringes for hypodermic injections.

The panel that reviewed them concluded that both ethyl and isopropyl alcohol, properly applied in the strengths listed, are safe and effective antimicrobials when used for the following indications:

- (1) for first-aid use to decrease germs in minor cuts and scrapes;
- (2) to decrease germs on the skin prior to removing a splinter or other foreign object; and
- (3) for preparation of the skin prior to an injection.

Correspondence Course Quiz

Self Medication of Topical Bacterial Infections

- 1) The term pyoderma is most associated with:
 - a. Blister production
 - b. Pus formation

- c. Skin infection
 - d. Tissue inflammation
- 2) The FDA advisory panel that reviewed boil remedies stated that which of the following is an effective means for drawing a boil to a head?
 - a. Epsom salts
 - b. Juniper tar
 - c. Moist heat
 - d. All of the above
- 3) Which of the following organisms is **LEAST** likely to infect the skin and cause systemic disease?
 - a. Lactobacilli
 - b. Staphylococci
 - c. Pseudomonas
 - d. Streptococci
- 4) Merthiolate® exerts its antibacterial activity by:
 - a. Combining with free sulfhydryl groups
 - b. Denaturing proteins
 - c. Interfering with cell wall development
 - d. Oxidizing the microorganism
- 5) Which of the following is **LEAST** appropriate for systemic treatment of impetigo contagiosa?
 - a. Procaine penicillin
 - b. Cephalosporin antibiotics
 - c. Erythromycin stearate
 - d. Clindamycin hydrochloride
- 6) Which of the following statements is true?
 - a. The pH of the skin is slightly alkaline.
 - b. Microbes optimally grow at an acidic pH.
 - c. Propionibacteria help prevent the overgrowth of pathogenic bacteria.
 - d. Excessive use of detergents or antimicrobial soaps will successfully protect the skin from infection by pathogenic bacteria.
- 7) All of the following have been ruled to be safe and effective for OTC topical use **EXCEPT**:
 - a. Bacitracin
 - b. Gramacidin
 - c. Polymyxin
 - d. Tetracycline
- 8) Which of the following statements is true about quaternary ammonium compounds?

(Continued on page 26)

BACTERIAL INFECTIONS

- a. There is significant difference in the microbial spectrum of the various members of the group.
 - b. They are effective against pseudomonas organisms in strengths safe for topical use.
 - c. They are effective as skin wound cleansers in strengths safe for topical use.
 - d. They are effective as antiseptics in strengths safe for topical use.
- 9) The term used to describe a boil is:
- a. Bullous
 - b. Carbuncle
 - c. Folliculitis
 - d. Furuncle
- 10) Which of the following has been ruled to be safe and effective as a skin wound cleanser?
- a. Hexylresorcinol
 - b. Iodophors
 - c. Merbromin
 - d. Phenol
- 11) All of the following are normal functions of the stratum corneum
EXCEPT:
- a. To help maintain the shape of the body
 - b. To help maintain the water content of skin at or above 50%
 - c. To prevent leakage of the body's contents
 - d. To prevent entry of outside materials into the body
- 12) Which of the following has the broadest spectrum of activity and is therefore considered most appropriate for topical use as a single agent?
- a. Bacitracin
 - b. Gramacidin
 - c. Polymyxin
 - d. Tetracycline
- 13) Iodine kills bacteria by:
- a. Combining with free sulfhydryl groups
 - b. Denaturing proteins
 - c. Inhibiting cell wall development
 - d. Oxidizing the microorganism
- 14) Ethyl alcohol, in a 65 to 95% concentration in water, is recommended for use in all of the following situations
EXCEPT:
- a. For preparation of the skin prior to injections
 - b. For sterilization of surgical equipment
 - c. To decrease germs on minor cuts
 - d. To decrease germs prior to removing a foreign object in the skin
- 15) Which of the following is **NOT** a true statement about impetigo contagiosa?
- a. It can be spread by the organisms in blister juice.
 - b. It can lead to systemic infection and kidney damage if untreated.
 - c. It is usually benign and self-limiting if properly treated.
 - d. It is caused by staphylococci organisms.

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NARD CREATES CENTER OF INDEPENDENT RETAIL PHARMACY

The National Association of Retail Drug-gists has established a National Center of Independent Retail Pharmacy to be housed in the NARD building in Alexandria, Virginia. The Center will encompass existing programs already sponsored by NARD, as well as new programs developed to strengthen the profession of community pharmacy. John A. Johnson, immediate past president of NARD, who will serve as chairman of the Advisory Council of the Center, praised the support NARD Corporate Members have given the National Center concept. The Advisory Council will be made up of chief executive officers of major companies providing goods and services to the independent retail pharmacist, and also have independent practitioners, academicians and NARD leaders as members.

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About Your Medicines offers answers to many common consumer questions, explaining what to do if a dose is missed, whether foods, alcohol, aspirin or other drugs can be used with the medicine, and how the medicine should be stored. Monographs are indexed by generic and selected brand names.

About Your Medicines is sold in an attractive display case to health care facilities, such as clinics or pharmacies, for resale to customers. Display cases of 12 copies may be purchased through the North Carolina Pharmaceutical Association at \$36.00 per case.

WALL STREET JOURNAL ARTICLE HIGHLIGHTS ABOUT YOUR MEDICINES

The January 5, 1984 edition of the *Wall Street Journal* carried a front-page reference to *About Your Medicines*.

"Drug-advice books proliferate enough to prompt Purdue University researchers to rate about a dozen of them. The highest rating goes to *About Your Medicines*, a \$4.95 volume from the U. S. Pharmacopoeial Convention, a not-for-profit standards-setting organization in Rockville, MD."

The study referred to in the article, "Comparison of Consumer-Oriented Books on Medications," was published in the January, 1984 issue of the journal, *Patient Education and*

Counseling, by Stephen W. Schondelmeyer, Pharm.D., Timothy P. Stratten, M.S., and Alan Barreuther, Pharm.D. Dr. Schondelmeyer is presently on the faculty of the Purdue University School of Pharmacy and Pharmacal Sciences, but the original research was done at the University of Arizona with Mr. Stratten and Dr. Barreuther.

The introduction of the study states that the purpose was "to provide health professionals with both objectives and descriptive criteria for the rational evaluation of and choice among consumer-oriented books on medications."

In this study, assessments of and comparisons among fifteen consumer-oriented books on medications were made with respect to a book's utility as a consumer-oriented source on medications. Readability, number of drugs covered, completeness of drug monograph information, price, and other factors for these fifteen publications were assessed. The authors suggested that these comparisons might assist the health professional, or the consumer, in making an informed decision with respect to appropriateness and usefulness when selecting one of these readily available sources of information on medications.

Management hint: If an employee is talking in anger, don't hurry to cut him or her off. Let him talk until he runs down or talks out (within reason, of course). Listen for the real problem, which may not be apparent. Help find, or try to find, an appropriate solution.

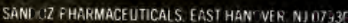
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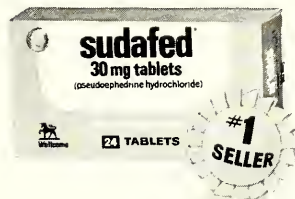
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Norman L. Halleman has been promoted to the newly created position of national sales manager, hospital and government sales. He will be responsible for sales, bids and contracts to government and civilian institutions. Halleman received a B.S. degree from Illinois Wesleyan University and joined the company in 1961 as a sales representative. He has served as field supervisor, district sales manager and hospital services manager. Halleman is a resident of Raleigh, N. C.

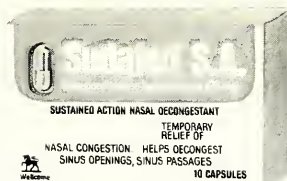
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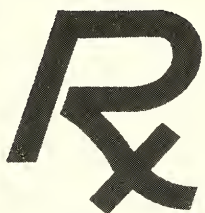
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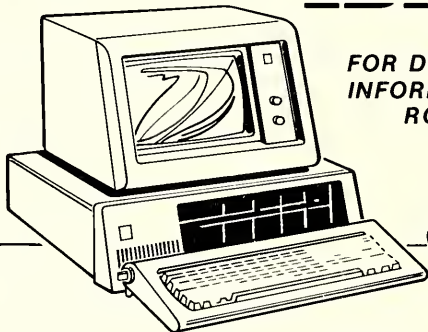


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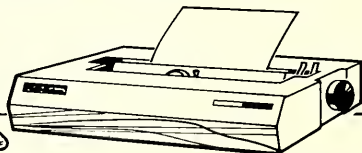


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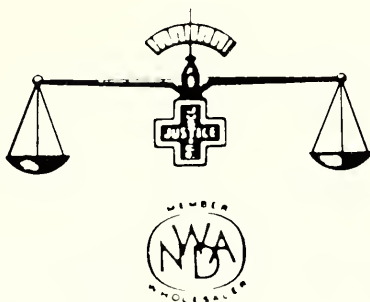
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REPORT OF THE PRESIDENT, DAVID D. CLAYTOR

**presented at the 104th Annual Meeting of the NCPHA,
Tuesday, April 10, 1984, Chapel Hill, NC**

It has been an honor to have served as your president for the past year. To be more accurate the last ten months. You can't have Boone in June and an April Thrill in Chapel Hill stretch out to make a year. This meant that Ernest Rabil, last year's president, served 14 months to my 10. At this time, I would like to again thank him for all his efforts. The passage of the Pharmacy Practice Act and the restrictions on Medicaid prescriptions were just some of the problems we faced during that year. Ed Nye, a former Senator from Bladen County, was employed and we began to anticipate legislation affecting pharmacy rather than learn about it after it was too late. Ed is seeking his old office back this year, and we may lose him as a lobbyist, but we should have another friend in the legislature. Also, Ernest and Paul Bissette became a part of a loose coalition representing chain pharmacies, the Merchants Association, and others which found they could be effective on many issues facing pharmacy and the small businessman. There may be occasions when we differ and be in opposition to each other, but that is politics. We can be most effective in our dealing with the Department of Social Services and Medicaid when we speak as one.

The one thing that I would like to be remembered for is the work done by others—the committee members. I don't believe any previous president has had better cooperation in this area. The turn-in sheet mailed after last year's convention was very helpful in making committee appointments. Al Mebane and I worked closely with each committee chairman for the most convenient times to meet. Notices were sent to all members with follow-up phone calls to those who didn't respond. We even had some ride-sharing which I hope will be continued. All of this produced effective results which is vital to the Association as a whole.

Three special committee appointments were made this past year. First—Paul Bissette of the Legislative Committee who was appointed by President Rabil was reappointed by me to continue to present the Association's

viewpoint on new regulations regarding institutional pharmacy under the new Pharmacy Practice Act. He worked with Bill Sawyer of the NC Society of Hospital Pharmacists to iron out areas of the disagreement between the two organizations concerning the proposed regulations. The two of them did a great job. There was adjustment and compromise to be made, and each side gave a little to accomplish the task. This cooperative effort is evidence that relations between NCPHA and NCSHP are improved. The Association has been doing mailings for them using the computer and also accepting their membership dues, etc. The Executive Secretary and President of each organization are invited to the meetings of the other organization. Relations between the two groups have never been better.

Secondly, a Task Force on the Impaired Pharmacist was formed in conjunction with the NC Society of Hospital Pharmacists. Jean Douglas representing NCSHP and I appointed as co-chairmen Ed Webb, Clinical Coordinator of the Mountain-AHEC and Dennis Moore, the pharmacist at Appalachian Hall, an institution known for its treatment of alcoholism, drug addiction and other mental conditions. We each then selected three committee members to form a committee of eight. The charge to this task force read: "to study the incidence of impairment among N.C. pharmacists and if a problem exists, recommend an appropriate program to deal with the impaired pharmacist. The task force should identify costs associated with the program and potential sources of resources and funds to assist the program." Needless to say, this committee has the full support and cooperation of the Board of Pharmacy and the School of Pharmacy. Thus far, the committee has reviewed literature and other material and held their first meeting during this convention.

Finally—an ad hoc committee was formed to review the constitution and bylaws. There is a saying, "If it ain't broke, don't fix it", which could have been applied here, but there were a few questions about the wording

Report of the President cont.

in the old constitution and bylaws. Jean Gagnon was appointed chairman of this committee which consisted of members from areas close to Chapel Hill. This worked out well as the committee met five times between November and March. We owe them an extra vote of thanks for their diligence and what seems to be an improved document.

I see a bright future for our Association. The membership of approximately 2000 is encouraging and the Association is working with the student body to increase membership from the new graduates.

There is among some of our pharmacists a feeling that they have little input in the running of the Association, and many times this may be caused by their failure to support their local society. Here is where we need more participation. We have great opportunities to build on what is already considered a good image by the American public. Speaking of image, I think the American public thinks more of us than we sometimes think of ourselves. It is a problem inherent in all professions, but it seems to be much more pronounced in pharmacy. I have heard it said that making more money for our efforts would improve our self image, but I seriously doubt it. What we need is a feeling of accomplishment in our work. In my opinion, this can be better achieved with patient counseling than with any other method we have, *and we are not taking advantage of it.*

Our pharmacist can do a lot to improve the image of pharmacy. *However*, collectively we can accomplish more by working together on all levels. The need for more local pharmacy organizations is great. If mandatory continuing education becomes a reality, a strong local society can be instrumental in attracting CE programs to their locality as well as providing a means by which their members can voice their needs and concerns. The distribution of our AHECs is such that we can use them effectively to provide continuing education, which will meet the needs of all North Carolina pharmacists. If my ten month term of office have any imprint on the Association, it will be due to the fine committee work and the thoughts and resolutions emanating from them. I think it would be appropriate at this time to remind *YOU*

the membership of the Association that involvement of yourself in committee work or running for office reaps positive rewards for the Association as well as for the profession of Pharmacy.

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When the nation has a problem as overwhelming and troublesome as the problem of drug abuse, the government cannot solve it alone. It needs private sector dollars, expertise and business clout to reinforce government spending.

That was the message delivered in 1982 by the White House in a plea for aid in the uphill fight against drug abuse. This message inspired McNeil Pharmaceutical and the Johnson & Johnson family of companies to develop Pharmacists Against Drug Abuse (PADA). PADA is an innovative antidrug program designed to educate the public on the dangers of illicit drug use through local community pharmacists.

This public service campaign, to be launched nationwide this April, will position 55,000 pharmacists across the country as resources for literature designed for the program, advice, and as speakers for school and community groups, television and radio shows on the subject of drug abuse. PADA currently enjoys the on-going support of the White House Drug Abuse Policy Office, ACTION, PRIDE and the National Federation of Parents.

Pharmacists are a natural vehicle to spread drug abuse awareness, being easily accessible and familiar figures in the community. According to McNeil Pharmaceutical President Jack E. O'Brien, "local pharmacists, by academic training and professional expertise are experts on drugs and an excellent source of information on drug abuse. The program will not be successful if all we do is distribute 12 million brochures on drug abuse throughout the United States. What is needed is for parents to get educated about drug abuse, to talk to their kids, to get involved in their communities, and to form and work with existing parents organizations that can turn around the drug problem and drug abuse culture in America."

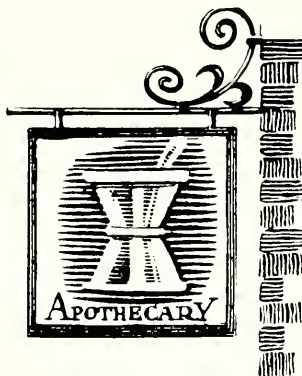
PADA is currently underway in the six New England states with close to 1200 pharmacists participating. During the initial pilot program launch, actor Michael Landon,

PADA national spokesperson, accompanied McNeil Pharmaceutical and White House representatives on a two-day, four-city launch.

Last spring, First Lady Nancy Reagan met with representatives of the pharmaceutical industry and McNeil executives at an annual National Association of Chain Drug Stores meeting in Washington, D.C., at which she endorsed PADA.

Pharmacists across the country, through their state pharmaceutical associations, will be receiving PADA materials prior to the March national launch. A free informational brochure, *The Kinds Of Drugs Kids Are Getting Into* available for distribution to the public will be in the package, as well as posters, wall banners, decals and pocket-savers identifying the pharmacy as *This is the Place Where Parents Can Learn About Drug Abuse*. A pharmacist guidebook, *Resources for Community Action — A Pharmacist's Guide to Drug Abuse* will inform pharmacists of updated facts on street drug and alcohol abuse and how to effectively market themselves as spokespersons for community school and parent groups.

In addition to the pharmacy components a comprehensive television, radio and print public service program will be made available to all major broadcast and print outlets nationwide. This will direct the public to their pharmacies for drug abuse information and help ensure the thorough distribution of the PADA message.



WILLIAMSTON

The Northeastern Carolina Pharmaceutical Society held its regular meeting Wednesday, April 11 at Cobb's Restaurant in Williamston, N.C. Approximately forty members were present for dinner, the business meeting and a "refresher" on gastrointestinal problems.

After the social hour, several items were discussed at the business meeting. Briefly, these included: presentation of a gavel to immediate past president James Bryant recognizing his contributions and efforts on behalf of the society; a unanimous resolution supporting mandatory continuing education; a resolution to send \$100.00 to the Pharmacy Research Foundation in memory of deceased members and a resolution to send \$100.00 to the NCPHA Student Loan Fund; an upcoming meeting of society members, the N.C. attorney General's Office and E.C.U. officials was announced. The meeting will address the Society's concern over the E.C.U. School of Medicine's Family Practice Center Pharmacy dispensing medications purchased on state contracts to out patients in direct competition with area pharmacies.

An informative presentation on gastrointestinal problems entitled "My Stomach Hurts—Pass the Maalox Please" followed. Donald Durkee, Pharm D at Chesapeake General Hospital in Chesapeake Va. provided us with a review of current therapy of ulcers and a few "pearls" from his own practice. Dr. Durkee's program was provided compliments of Roche Labs. Before the meeting was adjourned, pharmacists were reminded of the upcoming AHEC Spring Seminars and were encouraged to bring a new member to the June meeting.

JOHNSTON COUNTY

The Johnston County Pharmaceutical Society met at the Golden Corral Restaurant in Smithfield, March 28. 1984 officers elected were: Grover Creech—President; Lee Carter—Vice President; and Carlyle Woodard—Secretary Treasurer. A cook-out is planned for June.

Respectfully submitted,

Carlyle Woodard
Secretary-Treasurer



JEAN PAUL GAGNON

Jean Paul Gagnon has been elected President of the American Association of Colleges of Pharmacy. Dr. Gagnon will be installed at the 85th Annual Meeting of the Association in Baltimore, July 29–August 1, and will serve as President-Elect for one year. In the 1985–86 organizational year he will move to the position of AACP President and Chairman of the Board of Directors.

"I am very pleased to have been selected President Elect of AACP," Dr. Gagnon said on his election. "I have always believed in the purposes and objectives of the Association and I am honored to have been given the opportunity to play an important role in formulating and directing the Association's future."

Dr. Gagnon currently is Professor and Head, Division of Pharmacy Administration of the University of North Carolina at Chapel Hill School of Pharmacy. He has practiced pharmacy in a number of settings and completed research studies on prescription pricing, consumer attitudes toward pharmaceutical services and the effects of public policy decisions on drug distribution systems and pharmacy services. He has authored or co-authored fifty articles in a variety of journals. In 1981–82, Dr. Gagnon was a Robert Wood Johnson Health Policy Fellow in Washington and a staff person to the U.S. House of Representatives' Energy and Commerce Subcommittee on Health.

RALEIGH

Mrs. Margaret C. Yarborough (Peggy), Raleigh, has been selected as Diabetic Educator of the Year by the American Diabetic Association. She was chosen as the "Non Physician" Diabetic Educator and was the North Carolina nominee.

Mrs. Yarborough is the first pharmacist to receive this national award which will be presented to her in June, in Las Vegas, with a one thousand dollar cash award.

THE GUILFORD COUNTY SOCIETY OF PHARMACISTS Greensboro, North Carolina

The regular monthly meeting of the Guild County Society of Pharmacists was held at Swain's Steakhouse in Greensboro on Sunday evening, March 18, 1984. Following the social hour and dinner, guest speaker Peter Gal, Pharm.D., of the Greensboro AHEC, gave the assembled membership an "Update on Epilepsy", discussing such topics as new treatments, when not to treat seizure disorders, and what anticonvulsants are currently being used and why.

Following the program, a brief business session included: a treasurer's report, a welcome to the large group of pharmacists attending for the first time, most of whom were from the chain drugstores where the Society has been making a concerted effort to stimulate attendance; a report by Jean Douglas of Cone Hospital that the Cancer Society was offering to provide us with a program or materials for whatever format we thought appropriate (it was voted to pursue this offer for our June program); and a report by Program Chairman Tim Rice on the speakers for April and May. It was also moved and accepted that the Society not meet in July, and that we have our annual Greensboro Hornets Baseball Night in August. There being no further business, President Marilyn McConnell then adjourned the meeting.

Respectfully submitted,
J. Frank Burton, Sec. Treas.

CHARLOTTE WOMAN'S PHARMACEUTICAL AUXILIARY

The Charlotte Woman's Pharmaceutical Auxiliary held its annual fun day brunch at the home of Dollie (Mrs. Douglas) Corwin, Tues. March 13. Each member brought small house or flowering plants to exchange.

Mary Good (Mrs. Larry) state president of the Woman's Auxiliary of the NCPHA was the main speaker. She told about the plans for the April 8-10 state convention at the Hotel Europa in Chapel Hill. Shirley O'Neal (Mrs. W. P., Jr.) of Belhaven, state corresponding secretary was also a luncheon guest.

Jewell Oxendine (Mrs. Jesse) and Mary Lou Davis (Mrs. Leslie) assisted Dollie Corwin with the luncheon.

Billie Dagenhart
Corresponding Secretary
Charlotte Woman's
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INSTITUTIONAL PHARMACY REGULATIONS

Effective March 1, 1984

1311 INSTITUTIONAL PHARMACY

"Institutional Pharmacy" means, in addition to the provisions of G.S. 90-85.3 (q) a pharmacy maintained in a hospital, clinic, nursing home, rest home, sanatorium, non-federal governmental institution, industrial health facility, or other like health service, where there is a permit from the North Carolina Board of Pharmacy and is under the supervision of a pharmacist or where pharmacist consultant services are utilized. An institutional pharmacy must meet all requirements of state and federal law and the rules and regulations of the North Carolina Board of Pharmacy. "Institutional pharmacy" also refers to the central area in a hospital, clinic, or other health care facility where drugs are procured, stored, processed, or issued, or where pharmaceutical services are performed.

1401(c) SEPARATE REGISTRATION REQUIRED

The dispensing of drugs from separate locations within an institution, such as satellite pharmacies, may require separate registration. A separate registration and permit is required for any pharmacy within an institution if any one of the following criteria exist:

1. The drugs dispensed at the location are ordinarily and customarily obtained from a source outside of the institution; or,
2. The pharmacist-manager is controlled and supervised from a source other than the institutional pharmacy; or,
3. The routine activity at the location is dispensing drugs to outpatients.

Hospitals, clinics, nursing homes, rest homes, sanatoriums, nonfederal governmental institutions, industrial health facilities, and other like health services which do not have a pharmacy permit are required by law to secure their pharmaceutical services through a pharmacist holding a current license from the North Carolina Board of Pharmacy.

1312(b) SUPERVISION; SCHEDULE OF ATTENDANCE BY PHARMACIST

The pharmacist-manager employed or otherwise engaged to supply pharmaceutical services may have a flexible schedule for attendance but must be present for at least 1/2 the hours the pharmacy is open or 32 hours a week.

1402(c) SUPERVISION OF DRUGS IN AREAS OUTSIDE A PHARMACY

Drugs, medicines and related devices connected with pharmacy practice located in the institution shall be under the supervision of the pharmacist employed or otherwise engaged by the institution.

1403 ACCESS TO DRUG INVENTORIES; RECORDS; AUXILIARY DRUG INVENTORIES; EMERGENCY DRUG KITS

- (1) Auxiliary Drug Inventories are intended as supplementary source for drugs when the pharmacy is closed or the pharmacist is not available while Emergency Drug Kits are intended for use in a life threatening crisis, not as convenient supply. Acquiring drugs from the pharmacy by a nurse when the pharmacy is not open as specified below should be rare and occur only if the drug desired is not available in the Auxiliary Drug Inventory. The use of Auxiliary Drug Inventories is required to prevent frequent entries into the pharmacy by non-pharmacy personnel.
- (2) The pharmacist-manager shall have complete authority and control of any and all keys to the pharmacy and security of the pharmacy.
- (3) Except as hereinafter provided, only a pharmacist may have access to the institutional pharmacy inventory of drugs.
 - (a) "An auxiliary drug inventory is a closed segregated supply of medication used solely for the purpose of providing adequate drug availability when the pharmacy is closed or the pharmacist is unavailable. Only specifically authorized persons may obtain access by key or combination lock and the inventories shall be sufficiently secure to deny access to unauthorized persons. The pharmacist-manager shall, in connection

with the appropriate committee of the institution, develop inventory listings of those drugs to be included in such inventories and shall insure that:

- (i) Such drugs are available therein, properly labeled.
 - (ii) Only prepackaged drugs are available therein, in amounts sufficient for immediate therapeutic requirements.
 - (iii) Whenever access to such inventory shall have been gained, written licensed prescriber's orders and proofs of use, if applicable, are provided.
 - (iv) After each use of the Auxiliary Drug Inventory, the pharmacy shall be notified in accordance with written policies.
 - (v) The contents of the auxiliary drug inventory are checked by a responsible person in accordance with written policies and procedures of the institution and inventoried at least monthly by pharmacy personnel.
 - (vi) Written policies and procedures are established to implement the requirements of this section."
- (4) When the pharmacist is absent from the institution a responsible person in accordance with written policies and procedures of the institution may obtain from an institutional pharmacy inventory of drugs a drug or medication necessary to administer to a bona fide patient in carrying out treatment and medication orders as prescribed by a licensed prescriber; when such drug is not available in floor supplies to meet the immediate need. This person shall leave in the pharmacy, on a suitable form, a record of any drugs removed, showing the name of the patient, the name of the drug, dosage size, the amount taken, the date and time, and the signature of the person. A system shall be developed by the pharmacist-manager and used by all applicable personnel to document the entry. Such records shall be kept for three years. Provided that this Section shall not preclude the use of technical

personnel approved by the pharmacist-manager from being present in the pharmacy at other than regular service hours and performing certain clerical, repackaging and distributive functions in connection with a system of institutional drug distribution according to written policies and procedures and provided further that drugs so handled shall not be permitted to leave the pharmacy until all work so performed has been checked and certified as being correct by the pharmacist. Provided further, however, that this Section shall not preclude the use of an emergency drug kit or auxiliary drug inventory as hereinafter provided for.

- (a) Definition of Emergency Drugs. "Emergency drugs" as this term is used in this Section, are those drugs, the prompt use and immediate availability of which are generally regarded by physicians as essential in the proper treatment of unforeseen adverse changes in a patient's life or well-being.
- (b) Acquisition and Storage of Emergency Drugs.
 - (i) Emergency drugs shall be stored in a container secured by a non-reusable, easily breakable seal hereinafter referred to as the "emergency drug kit."
 - (ii) The contents of the emergency drug kit shall be determined by the pharmacy and therapeutics committee or equivalent and controlled substances in Schedules II-V shall not be allowed except as provided in Section 6 of this part. The emergency drug kit shall be periodically reviewed and examined by a pharmacist not less than quarterly. The contents of the emergency drug kit shall be in compliance with all applicable federal, state, and local laws, rules and regulations. A current list of the contents shall be attached to the exterior of the emergency drug kit.
 - (iii) Storage of the emergency drug kit shall be in a secure, readily

(Continued on page 12)

Institutional Pharmacy Regulations

- available location under the supervision of the nursing staff.
- (iv) After the emergency drug kit is used and its seal broken the pharmacy must be notified in accordance with written policies and procedures of the institution. The kit shall be replenished by a responsible person in accordance with written policies and procedures of the institution. Drugs and other articles used in the restocking and resealing of the emergency drug kit shall be under the supervision of the pharmacist. The emergency drug kit shall be checked by a responsible person in accordance with written policies and procedures of the institution. The supplier shall indicate on the emergency

drug kit in a clearly visible place an expiration date which in no case shall be later than the date of the first item to expire.

- (5) Records. Items used from the emergency drug kit shall be entered on the patient's clinical record according to the standard procedure of the facility.
- (6) Special Controlled Substances Emergency Drug Kit. For the purpose of complying with state and federal law, emergency drugs that are controlled substances must be stored in a separate emergency kit. Such controlled substances emergency drug kit shall meet all of the requirements of this Rule applying to emergency drug kits and in addition, be in compliance with the rules and regulations relative to controlled substances emergency drug kits.

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1404 MEDICATION IN INSTITUTIONAL EMERGENCY DEPARTMENTS

- (a) In those institutions having 24 hour outpatient pharmacy service, all drugs dispensed to outpatients including emergency department patients must be dispensed by a pharmacist.
- (b) In those institutions not having 24 hour outpatient pharmacy services, or those institutions having no outpatient pharmacy services drugs dispensed to emergency department patients when the outpatient pharmacy service is closed shall follow this procedure:
 - (1) All drugs shall be dispensed to a bonafide patient of the emergency room.
 - (2) The pharmacist shall be responsible for developing and supervising a system of control and accountability of all drugs administered in or dispensed from the emergency department.
 - (3) The institution's emergency department committee (or like group or person responsible for policy in that department) in conjunction with the pharmacist shall develop an emergency department formulary or drug list of those drugs which may be dispensed from the emergency department for patients receiving care in that department. This formulary or drug list shall consist of drugs of the nature and type to meet the immediate needs of emergency patients, and quantities in each container should be limited to not more than a 24 hour supply.
 - (4) Such drugs shall be prepackaged in suitable safety closure containers and shall be appropriately pre-labeled (including necessary auxiliary labels) by the pharmacist so as to provide for label information necessary for use as well as other information required by law.
 - (5) The physician, registered nurse under physician supervision, or person who is authorized to prescribe and dispense drugs pursuant to G.S. 90-18.1 or 90-18.2 shall comply with all regulations governing the dispensing of medications.

(6) A suitable and perpetual record of dispensing of these medications shall be maintained. The pharmacist shall verify the accuracy of this record at least once a month.

(7) The physician shall sign or counter-sign in the medical record all orders for medications within 72 hours of the initiation of that order.

1405 STANDARDS FOR PHARMACY SERVICE

The practice of pharmacy in institutions shall be rendered in accordance with the standards for pharmacies in institutions enacted or adopted by the Board. Any of the above standards are to be effective upon adoption.

1406 AUTOMATIC STOP ORDERS

In every institution where inpatient services exist, the pharmacy and therapeutics committee or its equivalent has the responsibility to adopt a policy stating a maximum period of time for the administration of medication ordered without a specific duration. In the absence of such an adoption by the pharmacy and therapeutics committee, the pharmacist-manager shall determine a maximum period.

1407 INSTITUTIONAL FORMULARY

Each institution may adopt a list of drugs and devices or other products as a formulary through the pharmacy and therapeutics committee or its equivalent. The purpose of such a formulary shall be to promote the optimum use of drugs, devices and nutritional products. Factors to be considered by this committee are safety, efficacy, quality, bio-availability, professional responsibility of manufacturers, availability, packaging and cost. Formulary drugs may be labeled with the generic name of the drug.

1408 INSTITUTIONAL DISCHARGE MEDICATION OPTION

Patients in the process of discharge from an institution, or their agent, may receive initial supplies of prescription drugs pursuant to a duplicate prescription order, that could be a photo copy, when a system is devised which meets the following criteria:

1. The patient receiving the drug is a bonafide patient in the process of dis-

(Continued on page 15)

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"We are fast approaching a new century—one which offers the promise of great research achievements in the field of human health. And pharmacists will have an important role in this coming adventure. It is instructive to pause for a moment and consider how far we have come in the past century. My grandfather was a pharmacist in the 1890's and the medicines he compounded and dispensed, and the outcomes, had not changed significantly since the time of George Washington. Little could he anticipate the advances in drug development and changes in pharmacy practice.

"A new era began with the start of the twentieth century. Basic scientific discoveries were made in understanding diseases. The first steps toward the design of specific chemotherapeutic agents took place in the Thirties and helped set the stage for a treasure trove of drug products. Pharmacists played a major role in the discovery and development of most of the products we have today. The commitment to research has resulted in marvelous benefits for mankind.

"Today, we are surrounded by all manner of new breakthroughs



*Louis C. Schroeter, Ph.D., R.Ph.
Vice President and General Manager,
Domestic Pharmaceutical Division, The Upjohn Company*

in our understanding of genetics and molecular biology. Upon this base of knowledge will be built the new therapies of the future...and pharmacists will play a vital role in their development. This is indeed an exciting prospect.

"There has never been a prouder time to be a pharmacist."

Institutional Pharmacy Regulations

- charge from the institution or its clinics.
2. The practitioner issuing the order has current staff privileges at the institution.
3. The patient will receive the original prescription to be filled and/or refilled at the pharmacy of their choice.
4. The duplicate original order, if used, is maintained on file in the institutional pharmacy for the statutory period and contains all items of information required for prescriptions under state and federal law and regulations.
5. The name of the drug, brand or generic whichever is actually dispensed, date of dispensing, strength, quantity and institution with telephone number is appropriately noted on the original prescription.
6. The quantity dispensed at the institution does not exceed a 30 day supply.
7. No controlled substances may be dispensed pursuant to a duplicate original order.

1409 RESEARCH PARTICIPATION

Pharmacists may participate in research efforts including but not limited to protocol dosing, precision and timing of drug administration, obtaining informed consent and other activities connected with investigational drug studies.

APHA PRESIDENT JOHN F. SCHLEGEL

Dr. John F. Schlegel has been selected by the APHA Board of Trustees as the next president of the American Pharmaceutical Association. Schlegel is expected to commence his three-year term on August 1, 1984, replacing interim president Maurice O. Bectel.

Schlegel was born December 18, 1944, in Ogden, Utah, and was reared in Richmond, California. He obtained his B.S. in Pharmacy from the University of the Pacific in 1967 and his Pharm.D from the University of Southern California in 1972. He served as chief pharmacist for the USC campus from 1967 to 1973 and from 1973 to 1975 was Director of Pharmacy Admissions for the USC School of Pharmacy. In 1980 he received his Master of

Science degree in Education (with special emphasis on professional education and administration) from the School of Education.

Dr. Schlegel joined the staff of the American Association of Colleges of Pharmacy in 1975, serving two years as Director of the Office of Student Admissions. From 1977 to 1981, he was Assistant Executive Director and was selected in 1981 as Executive Director, representing 72 schools of pharmacy in the United States.

The new APHA President has served on the Pharmacy National Advisory Committee of the Veterans Administration and as a consultant to Dow Chemical. He was a 1981 delegate to the White House Conference on Aging; 1982 Rho Chi Lecturer; 1982 Parke Davis Lecturer; and currently serves as president of the National Drug Trade Conference.

MEDICAID AUTOMATED BILLING

Electronic Data Systems in Raleigh, fiscal agent for the Medicaid program, the capability to accept Pharmacy-Medicaid claims electronically through two modes of submission.

Using the IBM Personal Computer, pharmacists may now enter their claims and transmit them over telephone lines directly to EDS in Raleigh. Easy-to-use diskettes (software) and a training Manual will be distributed by EDS to pharmacists at no charge.

Tape-to-Tape billing of Pharmacy-Medicaid claims is available to Pharmacists and billing services who have tape-generating capability. The specifications for this mode of submission are available at no charge. For further information please contact Janelle Massey, ECS Coordinator at 1-800-662-7450 or 1-800-662-7049.

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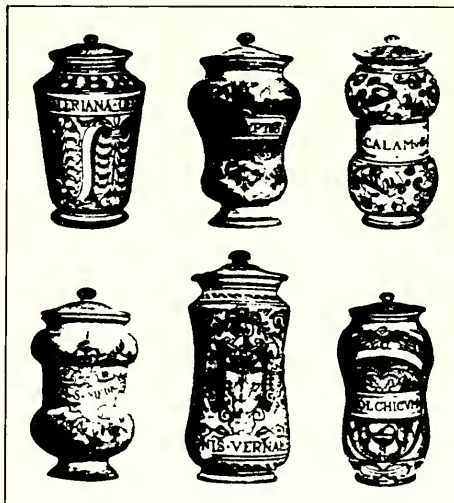
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PROPRANOLOL

Propranolol has a membrane-stabilizing effect which may make it useful as a contraceptive. The drug apparently produces a reduction in sperm motility and thus studies will continue to see if its effectiveness is seen in larger groups of women. The drug is used vaginally but some systemic effects may be present. Since the dextro isomer of propranolol has fewer cardiovascular effects but still maintains the ability to stabilize membranes, it may be preferred to the levo isomer or the racemic mixture for use in this study. *Br Med J*, Vol. 287, #6401, p. 1245, 1983.



NARD AND MERCK ANNOUNCE GRANTS

The NARD Foundation has been awarded a Grant from The Merck Company to support a program of "Demonstration Grants in Community Pharmacy."

Frank A. Lobraico, President of the NARD Foundation and William N. Tindall, Ph.D., NARD's Director of Professional Affairs were notified of the Merck support by Mr. Vernon Baker, executive Vice President of The Merck Company Foundation. Mr. Lobraico announced, "We are hopeful that individual grants to independent practitioners can be made on an annual basis. We thank Merck for recognizing the great need for research projects in independent pharmacy that will document and position it as a cost effective health care resource."

Practitioners of independent pharmacy, with or without academic collaborators, can submit proposals in support of projects in the range of \$2,000 to \$5,000. Selection will be

made on the basis of written proposals containing a realistic budget, the outcomes expected, a system to complete the objectives, a time schedule to meet the objective and the value of the outcome to independent retail pharmacy. Submissions should contain a biographical sketch of the principal investigator and any others collaborating on the work. The Division of Pharmacy Administration, UNC School of Pharmacy, has offered to work with any practitioner interested in applying for one of these grants.

Final selection will be made by the NARD Foundation. Application deadline for the 1984 program is June 29, 1984. Recipients will be notified by July 16, 1984 with funding to begin upon notification. Successful pharmacists must complete a manuscript suitable for publication.

Further information on the submitting of proposals may be obtained by writing: William N. Tindall, Ph.D., NARD, 205 Daingerfield Road, Alexandria, Virginia 22314.

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WHY PHARM.D.?

By Eric M. Parker, RPh.

A great deal of current discussion in pharmacy circles has focused on the need for a reevaluation of the educational process by which future practitioners are trained. Specifically, debate has centered on the need for a single, universally accepted entry-level degree as well as the adequacy (or inadequacy) of present academic curricula. Although these problems seem to pale in comparison to what are perceived as more pressing issues (e.g. the inequities of third party reimbursement), successful resolution of pharmacy's educational dilemma is essential to the future viability of the profession.

The present two-tiered degree system (i.e. B.S. and Pharm.D. degrees) is undoubtedly a divisive thorn in pharmacy's side. This dichotomy in professional degrees has predictably led to separate by unequal classes of practitioners which could simplistically be referred to as "doctors" and "non-doctors." Such a distinction will inevitably lead to internecine conflicts as well as confusion on the part of the public and other health professionals. Thus the problem is not primarily the existence of multiple degrees per se but the nomenclature assigned to the respective degrees. The confusing nomenclature is evidenced by the proliferation of prefixes (Dr.) and suffixes (P.D.) which pharmacists now attach to their names in vain attempts to keep pace with their professional colleagues.

The current dilemma surrounding pharmacy degrees is a direct result of the futile attempt by pharmacy educators to create a quasi doctoral degree program (i.e. the Pharm.D. degree) which would mandate respect for the profession merely by virtue of its title. To bestow doctoral status on *any* entry-level, undergraduate degree in pharmacy is ludicrous, charlatanic, and contrary to traditional academic policy. The attainment of a doctoral degree in virtually all other academic disciplines requires at least four additional years of post-baccalaureate training combining didactic, clinical, and/or basic research elements. Clearly the Pharm.D. degree does not meet these traditional academic standards for defining a doctoral program. Furthermore the adoption of degrees which are perceived as undeserved

or ill-defined is confusing and, in some cases, offensive to the public and other health professionals. Similar arguments apply to the recently contrived P.D. degree. Although pharmacy should indeed adopt a universal entry-level degree, the profession should refrain from garnishing the degree with ill-conceived and undeserved labels. Such a policy would eliminate confusion on the part of the general public and would prevent the self-defeating intra-professional feuds (witness the P.D. travesty of last year) which have resulted from the creation of two classes of pharmacists.

The content of the entry-level degree is also an important consideration. Most observers agree that the clinical component of pharmacy practice will become increasingly prominent in future years. Unfortunately this prediction has been misinterpreted as strong evidence of the need for a single entry-level degree comprising the essential elements of the Pharm.D. degree. Although the Pharm.D. degree as it currently exists provides training suitable for clinical practitioners in a hospital environment, the training is not nearly as suitable as pharmacists pursuing careers in other areas of practice. In fact only 25% of pharmacy college graduates choose to practice in a hospital setting. Practitioners in non-hospital settings obviously have different educational needs due to the markedly different nature of their practice. For example, community pharmacists require extensive knowledge of business and financial principles in order to maintain competitive and solvent practices. Such training is not embodied in traditional Pharm.D. degree programs (and incidentally is lacking in many baccalaureate degree programs). Thus while pursuing an acceptable definition of a single entry-level degree for pharmacists, the inherent heterogeneity of pharmacy practice must be borne in mind.

So what course of study would be most appropriate in the training of future pharmacists? I feel that the present five-year baccalaureate degree program can adequately serve the profession as the universal entry-level degree provided appropriate modifications are made. Such modifications should include a strengthening of clinical training, renewed emphasis on principles of

(Continued on page 22)

WHY PHARM.D.?

financial management, and elimination of course duplication and outdated courses. The curriculum should also be designed to accommodate date sufficient elective courses which allow students to pursue specialized knowledge in their prospective career setting. Students wishing to pursue advanced training in a specific area of pharmacy practice (e.g. clinical hospital pharmacy, community pharmacy, basic pharmaceutical sciences, etc.) can enter graduate level programs and/or residencies leading to the M.S. or Ph.D. degrees. Such a scheme would be in accordance with traditional academic policy and would avoid the currently existing system of self-proclaimed titles and degrees.

Perhaps pharmacy has already passed the point of no return in ultimately adopting the Pharm.D. degree as the single entry-level degree of the profession. Nevertheless educators and practitioners will hopefully pause in the midst of their Pharm.D. fervor and consider other options which may prove to be more beneficial to the future viability of the profession.

Eric Parker, a 1982 graduate of the UNC School of Pharmacy, is enrolled in the Ph.D. program in Pharmacology at UNC.

BAD CHECKS—ARE YOU GETTING MORE THAN YOUR SHARE?

The best defense against being victimized by bad checks—whether it's an all bad check written by a crooked person, or a salvageable one written by somebody who is just slightly "bent"—is to institute and enforce sound check cashing procedures in your place of business. According to the Small Business Administration, for every merchant who refuses to accept a check because it is improperly written, or contains abbreviated information or for lack of proper identification, many other merchants will cash the same check without hesitation.

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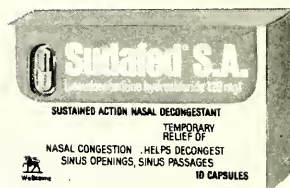
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*Nat'l Whol. & Chain Withdrawal Aud. — Apr. 1982

Obtaining Drug Information From Pharmaceutical Manufacturers*

By

Fred Schneiweiss

Director, Drug Information Center,

Northeastern University, College of Pharmacy and

Allied Health Professions

There are occasions when pharmaceutical and/or medical information is required, by telephone, from manufacturers of drug products. The usual reference source for telephone numbers of pharmaceutical manufacturers is the *Physicians' Desk Reference (PDR)*. However, the *PDR* does not indicate whether a company will accept a collect call, whether an 800 number is available, whether a special number or extension is available for reporting side effects, and what number should be used for after-hours emergency cases.

This survey of *PDR*-listed major manufacturers was undertaken to ascertain which numbers should be used in certain cases, whether collect calls are accepted, or whether 800 numbers are available. The results are presented in Table 1. Interestingly, the numbers provided by companies differed, in many cases, from the numbers listed in the *PDR* and, occasionally, from those listed by Zonenshine and Hunter in their directory of pharmaceutical manufacturers.¹

In regard to emergency numbers, some manufacturers record messages and respond the following day; others have "guards" who take messages and then contact another employee who returns calls. Finally, some emergency numbers are for direct lines to on-call employees who may be able to offer immediate help. Not all of the responding manufacturers provided this type of information.

Reference

¹Zonenshine MB, Hunter JF Numbers to call for drug information. A director of pharmaceutical manufacturers. *Drug Ther* 1980; 10:154-6.

Table 1. Telephone Numbers for Pharmaceutical Manufacturers

COMPANY NAME AND ADDRESS	COLLECT CALLS ACCEPTED?	GENERAL PRODUCT INFORMATION	REPORTING SIDE EFFECTS 800 NUMBERS	AFTER-HOURS EMERGENCIES
Abbott Hospital Products (injectables) Abbott Laboratories Abbott Park North Chicago, IL 60064	yes	312-937-3806	312-937-3825	312-937-6100
Abbott Pharmaceutical Products(oral) Abbott Laboratories Abbott Park North Chicago, IL 60064	yes	Formulation Bioavailability Stability 312-937-7302 Medical use of products 312-937-7069	312-937-3400	312-937-6100
Adria Labs, Inc. PO Box 16529 Columbus, OH 43216	yes	614-764-8100	614-764-8100	614-764-8100
Alcon Labs, Inc. PO Box 1959 Fort Worth, TX 76101		817-293-0450		

(Continued on page 24)

Table 1. Telephone Numbers for Pharmaceutical Manufacturers

COMPANY NAME AND ADDRESS	COLLECT CALLS ACCEPTED?	GENERAL PRODUCT INFORMATION	REPORTING SIDE EFFECTS	800 NUMBERS	AFTER-HOURS EMERGENCIES
Allergan Pharmaceuticals 2525 Dupont Dr. Irvine, CA 92713	yes	714-752-4500	714-752-4500		
Almay, Inc. 850 Third Ave. New York, NY 10022	no	919-362-7422			919-362-7422
Alto Pharmaceuticals 15509 Casey Road Ext. Tampa, FL 336246	yes	813-961-1010	813-961-1010		813-961-1010
American Critical Care 1600 Waukegan Rd. McGraw Park, IL 60085	yes 8 am-4:30 pm IL only	312-473-3000	312-473-3000	800-323-4980 (outside IL)	800-323-4980 312-473-3000
Ames Division Miles Laboratories, Inc. PO Box 70 Elkhart, IN 46515	no	219-264-8645			219-264-8400
Armour Pharmaceutical Co. 303 S. Broadway Tarrytown, NY 10591	no	914-631-8888	914-631-8888 Ext. 5570	800-431-1328	800-435-1852
Arnar-Stone (see American Critical Care)					
Astra Pharmaceutical Products, Inc. 7 Neponset St. Worcester, MA 01606	yes	617-852-6351	617-852-6351	800-225-6333 800-922-8584 (MA only)	617-852-6351
Ayerst Laboratories 685 Third Avenue New York, NY 10017	yes	212-878-5996 212-878-5999	212-878-5996 212-878-5999		212-986-1000
B. F. Ascher and Co., Inc. 15501 W. 109 St. Lenexa, KS 66219	no	913-888-1880	913-888-1880		816-761-2502
(Balmex) Mascil, Inc. 1326-38 Frankford Ave. Philadelphia, PA 19125	no	215-423-5566	215-739-7300		215-ES9-0869
Barnes-Hind Pharmaceuticals 895 Kifer Rd. Sunnyvale, CA 94086	no	408-736-5462	408-736-5462	800-538-1562	
Barry Labs, Inc. 461 NE 27th St. Pompano Beach, FL 33064	no	305-943-7722	305-943-7722	800-327-1141 (outside FL)	
Beecham Laboratories 501 Fifth St. Bristol, TN 37620	yes	615-764-5141 Ext. 363	615-764-5141 Ext. 363	800-251-0271	615-764-5141 703-669-9199
Berlex Laboratories 110 E. Hanover Ave. Cedar Knolls, NJ 07927	yes	201-694-4100	201-540-8700		201-539-9273 (first) 201-382-7584 (2nd) 201-658-3355 (third)
Breon Laboratories, Inc. 90 Park Ave. New York, NY 10016	yes	212-907-2749	212-907-2708		212-907-2000
Bristol Laboratories PO Box 657 Syracuse, NY 13201	yes	315-432-2668 (Nonmedical) 315-432-2838 (Medical)	315-432-2838 (Anticancer) 315-432-2713 (All others)		315-432-2121
Burroughs Wellcome Co. 3030 Cornwallis Rd. Research Triangle Park, NC 27709	yes	919-541-9090	919-541-9090		919-541-9090

Table 1. Telephone Numbers for Pharmaceutical Manufacturers (cont.)

COMPANY NAME AND ADDRESS	COLLECT CALLS ACCEPTED?	GENERAL PRODUCT INFORMATION	REPORTING SIDE EFFECTS	800 NUMBERS	AFTER-HOURS EMERGENCIES
Central Pharmacal Co., The 110-128 E. Third St. Seymour, IN 47274	yes	812-522-3915	812-522-3915 Ext. 37		812-522-7574
Ciba Pharmaceutical Co. 556 Morris Ave. Summit, NJ 07901	no	201-277-5049	201-277-5049	800-631-7994	201-277-5049
Connaught Laboratories, Inc. Swiftwater, PA 18370	yes	717-839-7187 Ext. 206	717-839-7187 Ext. 206		717-839-7187
Cutter Biological Div. Cutter Labs, Inc. 2200 Powell St. Emeryville, CA 94662	yes	415-420-4181	415-420-4181	800-227-1762 (outside CA)	415-420-5059
Dermik Laboratories, Inc. 1777 Waltun Rd. Dublin Hall Blue Bell, PA 19422	yes	215-641-1863	215-641-1962	800-523-6674	215-628-6000
Dista Products Co. (see Lilly)					
Dome Laboratories (see Miles Pharmaceuticals) Dorsey Laboratories PO Box 83288 Lincoln, NE 68501	no	402-464-6311 Ext. 363	201-386-7764		402-464-6311
Drummer Labs Div. Lemmon Co. 111 Levning St. South Hackensack, NJ 07606	no	201-343-5000	201-343-5000	800-526-0225	201-343-5000
Elkins-Sinns, Inc. 2 Esterbrook Lane PO Box 5483 Cherry Hill, NJ 08034	yes	609-424-3700 Ext. 188	609-424-3700 Ext. 188	800-257-8349	800-257-8349
Endo Labs, Inc. 1 Rodney Square Wilmington, DE 19898	yes	302-773-3652	302-773-3652	800-441-7516	302-774-1000
Flint Laboratories Travenol Laboratories, Inc. 1425 Lake Cook Rd. Deerfield, IL 60015	yes	312-940-5972	312-940-5972	800-323-5810	
Geigy Pharmaceuticals 556 Morris Ave. Summit, NJ 07901	yes	201-277-5000	201-277-5049		201-277-5000
Glaxo, Inc. Div. New Product Development 3306 Highway 54 Research Triangle Park, NC 27709	yes	919-549-9507	919-549-9507		919-549-9507
Glenbrook Laboratories 90 Park Ave. New York, NY 10016	yes	212-907-2741	212-907-2740		212-972-2000
Hoechst-Roussel Pharmaceuticals, Inc. Route 202-206 N Somerville, NJ 08876	yes	201-231-2611	201-231-2611		201-231-2000
Hynson, Westcott & Dunning, Inc. Becton Dickinson Immunodiagnosics Charles & Chase Sts. Baltimore, MD 21201	no	800-638-1532	800-638-1532	800-638-1532	801-837-0890
Invenex Pharmaceuticals 5885 Lakehurst Dr. Orlando, FL 32809	yes	800-327-2117	800-327-2117	800-327-2117	

(Continued on page 26)

Table 1. Telephone Numbers for Pharmaceutical Manufacturers (cont.)

COMPANY NAME AND ADDRESS	COLLECT CALLS ACCEPTED?	GENERAL PRODUCT INFORMATION	REPORTING SIDE EFFECTS	800 NUMBERS	AFTER-HOURS EMERGENCIES
Ives Laboratories, Inc. 685 Third Ave. New York, NY 10017	yes	212-878-5166 (Medical) 212-878-5118 (Pharmaceutical)	212-878-5166		914-796-9060
Key Pharmaceuticals, Inc. 18425 NW Second Ave. Miami, FL 33169	yes	305-652-2276	305-652-2276	800-327-9054	800-327-9054
Knoll Pharmaceuticals Co. 30 N. Jefferson Rd. Whippany, NJ 07981	yes	201-887-8300	201-887-8300	800-526-0221	800-526-0221
Lannett Co., Inc. 9000 State Rd. Philadelphia, PA 19136	no	215-333-9000	215-333-9000		215-745-1715
Lederle Laboratories Middletown Rd. Pearl River, NY 10965	yes	914-735-5000	914-735-5000		914-735-5000
Lemmon Co. PO Box 30 Sellersville, PA 18960	yes	800-523-6542 Ext. 271, 2, 3	800-523-6542 Ext. 271, 2, 3	800-523-6542	215-624-1103
Lilly, Eli & Co. 307 E. McCarty St. Indianapolis, IN 46285	yes	317-261-3714	317-261-3714		317-261-2000
Marion Laboratories, Inc. PO Box 9627 Kansas City, MO 64134	no	816-761-2500 Ext. 1362	816-761-2500 Ext. 1362	800-821-2130 Ext. 1362	800-821-2130
McNeil Pharmaceutical Spring House, PA 19477	yes	215-628-5000	215-628-5139		215-628-5000
Mead Johnson & Co. Pharmaceutical Division 2404 Pennsylvania St. Evansville, IN 47721	yes	812-428-5123 812-428-5125 812-428-5128	812-428-5123 812-428-5125 812-428-5128		812-426-6064
Merck Sharp & Dohme West Point, PA 19486	yes	215-661-7300	215-661-6150		215-661-5000
Merrell Dow Pharmaceuticals, Inc. Subsidiary Dow Chemical Co. Cincinnati, OH 45215	yes (emergencies only)	513-948-9111	513-948-9111		513-948-9111
Miles Laboratories, Inc. PO Box 40 Elkhart, IN 46515	no	219-264-8111	219-264-8111		
Miles Pharmaceuticals Miles Labs, Inc. 400 Morgan Lane West Haven, CT 06516	yes	203-934-9221	203-934-9221 Ext. 2373	800-243-4153	203-934-9221
Muro Pharmaceutical, Inc. 890 East St. Tewksbury, MA 01876	no	617-851-5981	617-851-5983	800-225-0974	617-851-5981
Neutrogena Dermatologics PO Box 45036 Los Angeles, CA 90045	no	213-776-5223	213-776-5223	800-421-6857	213-776-5223
Norcliff Thayer, Inc. 303 S. Broadway Tarrytown, NY 10591	no	914-631-0033	914-631-0033		303-592-1714
Norwich-Eaton Pharmaceuticals, Inc. 17 Eaton Ave. Norwich, NY 13815	yes	607-335-2565	607-335-2091		607-335-2565 607-335-2111

Table 1. Telephone Numbers for Pharmaceutical Manufacturers (cont.)

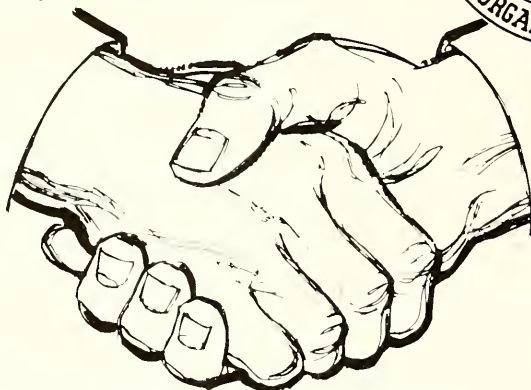
COMPANY NAME AND ADDRESS	COLLECT CALLS ACCEPTED?	GENERAL PRODUCT INFORMATION	REPORTING SIDE EFFECTS	800 NUMBERS	AFTER-HOURS EMERGENCIES
O'Neal, Jones & Feldman 2510 Metro Blvd. Maryland Heights, MO 63043	yes	314-569-3610	314-569-3610		314-878-6149
Organon Pharmaceuticals 375 Mount Pleasant Ave. West Orange, NJ 07052	no	201-325-4500	201-325-4500		
Ortho Pharmaceutical Corp. Raritan, NJ 08869	yes	201-524-9650 201-524-9651 201-524-9652	201-524-9650 201-524-9651 201-524-9652		201-524-1566
Parke-Davis Div. Warner Lambert 201 Tabor Rd. Morris Plains, NJ 07950	yes	201-540-4243 201-540-4241 201-540-2117	201-540-2301		201-540-2000
Pfipharmecs Division Pfizer, Inc. 235 E. 42nd St. New York, NY 10017	yes	212-573-2323	212-573-2323		212-573-2323
Pfizer Labs Pfizer, Inc. 235 E. 42nd St. New York, NY 10017	yes	212-573-2422	212-573-2422		212-573-2422
Pfizer, Inc. Consumer Products 100 Jefferson Rd. Parsippany, NJ 07054	no	201-887-2100	201-887-2100		201-887-2100 212-573-1456
Premo Pharmaceutical (see Drummer)					
Procter and Gamble Co. 11520 Reed Hartman Hwy. Cincinnati, OH 45241	no	800-543-1745 800-582-0345	800-543-1745 800-582-0345	800-543-1745 800-582-0345	800-543-1745 800-582-0345
Purdue Frederick Co. 50 Washington St. Norwalk, CT 06856	yes	203-853-0123	203-853-0123	800-243-5666	203-853-0123
Purepac Pharmaceutical Co. 200 Elmora Ave. Elizabeth, NJ 07207	no	201-527-9100	201-527-9100	800-526-6978	
Reed & Carnrick 1 New England Ave. Piscataway, NJ 08854	yes	201-981-0070 Ext. 521	201-981-0070 Ext. 521		201-272-6600 Ext. 524
Reid-Provident Laboratories, Inc. 25 Fifth St. NW Atlanta, GA 30308	yes	404-898-1066 404-898-1043	404-898-1066 404-898-1043	800-241-9937	404-241-9937
Riker Labs, Inc. Subsidiary 3M Co. 19901 Nordoff St. Northridge, CA 91324	yes	213-709-3159	213-709-3137		213-341-1300
Robins, A. H. Co., Inc. 1211 Sherwood Ave. Richmond, VA 23220	yes	804-257-2514	804-257-2514		804-257-2000 804-257-7788
Roche Laboratories Div. Hoffmann-LaRoche 340 Kingsland St. Nutley, NJ 07110	yes	201-235-2355	201-235-2355		201-235-2355
Roerig Div. Pfizer, Inc. 235 E. 42nd St. New York, NY 10017	yes	212-573-3288	212-573-3288		212-573-2187

(Continued on page 29)

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Table 1. Telephone Numbers for Pharmaceutical Manufacturers (cont.)

COMPANY NAME AND ADDRESS	COLLECT CALLS ACCEPTED?	GENERAL PRODUCT INFORMATION	REPORTING SIDE EFFECTS	800 NUMBERS	AFTER-HOURS EMERGENCIES
Rorer, William H., Inc. 500 Virginia Dr. Ft. Washington, PA 19038	yes	215-628-6492 215-628-6000	215-628-6321 215-628-6000		215-628-6200 215-628-6000
Ross Laboratories 625 Cleveland Ave. Columbus, OH 43216	no	614-227-3703 614-227-3333	614-227-3703		614-227-3333
Roxane Laboratories, Inc. PO Box 16532 Columbus, OH 43216	yes	614-228-5403	614-228-5403	800-848-0120	614-228-5403
Sandoz Pharmaceuticals PO Box 11, Route 10 East Hanover, NJ 07936	yes	201-386-7764	201-386-7764		201-386-7500
Schering Corp. Galloping Hill Rd. Kenilworth, NJ 07033	yes	201-558-4908	201-558-4118		201-558-5301
Searle Laboratories PO Box 5110 Chicago, IL 60680	no	800-323-4204 Medical hot line) 312-470-6750 (Product manager)	800-323-4204 (Medical hot line) 312-470-6513 (Marketing services)	800-323-4204 800-323-4397 (Marketing services)	312-982-7000
Serono Laboratories, Inc. 11 Brooks Dr. Braintree, MA 02184	yes	617-848-8404	617-848-8404	800-225-5185	800-225-5185 617-848-8404
Smith, Kline, Beckman Corp. PO Box 7929 Philadelphia, PA 19101	no	215-751-4000	215-751-4000	800-523-4835	215-751-4000
Squibb, E. R. PO Box 4000 Princeton, NJ 08540	yes	609-921-4006	609-921-4006		609-921-4000
Stiefel Laboratories, Inc. 2801 Ponce de Leon Blvd. Coral Gables, FL 33134	yes	800-327-3858	518-239-6901	800-327-3858	800-327-3858
Stuart Pharmaceuticals Concord Pike Wilmington, DE 19897	yes	800-441-7758	800-441-7758	800-441-7758	302-575-3000
Syntex Laboratories, Inc. 3401 Hillview Ave. Palo Alto, CA 94304	yes	415-855-5050	415-855-5545		415-855-5050
Upjohn Co., The 7171 Portage Rd. Kalamazoo, MI 49001	yes	616-323-6615	616-323-6244	800-253-8600	616-323-6615
U.S. Ethicals, Inc. 37-02 48th Ave. Long Island City, NY 11101	no	212-786-8606	212-786-8606		
USV Laboratories, Inc. 303 S. Broadway Tarrytown, NY 10591	yes	914-631-8500	914-631-8500		914-779-6300
Viobin Corp. 226 W. Livingston Monticello, IL 61856	no	217-762-2561	217-762-2561		217-352-0799
Westwood Pharmaceuticals 468 Dewitt St. Buffalo, NY 14213	yes	716-887-3400	716-887-3400		
Winthrop Laboratories 90 Park Ave. New York, NY 10016	yes	212-907-2579	212-907-2579		212-907-2000
Wyeth Laboratories PO Box 8299 Philadelphia, PA 19101	yes	215-MU8-4400	215-MU8-4400		215-MU8-440

**You are Cordially Invited to the
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THOMAS REEVES BURGISS
1984 Pharmacist of the Year**

Saturday evening

July 14, 1984

Dinner 5:30 p.m.

Marion's Country Ham House

Program following Dinner

Snow-Armentrout Auditorium

Glade Valley School

Reception following Program

Tom Burgiss of Sparta has been chosen for this high honor by the North Carolina Pharmaceutical Association, and the announcement was made at the opening session of the 104th Annual Convention in Chapel Hill, NC, April 8, 1984.

Tom's contributions to Pharmacy and his community which led to this award will be recognized by friends and professional associates during the program following the dinner.

The Mortar-and-Pestle Award which he will receive is the most coveted award granted by the North Carolina Pharmaceutical Association and will be presented by David D. Claytor, immediate past president of the Association. Current NCPHA President W. Artemus "Teamie" West will preside at the meeting.

Reception—Tom and Nancy Burgiss will host an open house at their home in Laurel Springs following the program.

RESERVATIONS

You may make your reservation for the dinner honoring Tom Burgiss by returning the form below not later than July 2, 1984. A limited number of motel rooms are available through the NCPHA. Rates are \$44.00 for a double or single. These rooms will be assigned on a **first come, first served basis**. Maps of the area will be sent with your Dinner Reservations.

MAIL TO: Pharmacist-of-the-Year Dinner, P. O. Box 151, Chapel Hill, NC 27514

Please reserve _____ places for the Pharmacist-of-the-Year Dinner at \$13.50 each (wives/husbands of members are most cordially invited).

NAME _____

MAILING ADDRESS _____

_____ Zip _____ Telephone (____) _____

[] Please make a motel reservation for the evening of July 14.

[] Double [] Single

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Dinner Reservations—	\$13.50 each	\$ _____
Motel Reservations—	\$44.00	\$ _____
	TOTAL	\$ _____

PHARMACIST AS SPECIALIST?

Cynthia Knapp

Institutional Pharmacy Practice

"To be sure, there will be a need for specialists in the future . . ."

G.C. Bowles, Jr.

So predicted Grover C. Bowles Jr. in his 1972 article, "When Everyone is a Specialist, Who Will Do the Work of the Hospital Pharmacist?" (1), which dealt with the controversial phenomenon of the pharmacy specialty practitioner. In the decade since that article appeared, the concept of the existence of specialty areas within the realm of pharmacy practice has become widely accepted. On August 25, 1982, the American Pharmaceutical Association Board of Pharmaceutical Specialties officially designated 63 pharmacists as specialists in nuclear and thus created the first specialists ever certified in the field of pharmacy (2). Although the move toward the recognition of such specialty areas has potential disadvantages, it is a move that must be made in order to ensure the future prosperity of the pharmacy profession.

Several events that occurred in the early 1970's initiated the current interest in recognition of specialties in pharmacy practice. In 1973, D.C. Brodie et al identified five roles that should be performed by pharmacists (3); however, these very general functions—those of manager of all drug-related resources, health educator, drug consultant, maintenance care monitor, and primary care and triage practitioner—were too diverse to be performed satisfactorily by any one individual and pointed to the need for specialists. The 1975 Millis Commission report emphasized the need to give consideration to specialization in pharmacy practice. Also in 1973, the American Pharmaceutical Association's Board of Trustees created a task force on specialties in pharmacy which resulted in the establishment of the nine-member Board of Pharmaceutical Specialties in 1976. The Board of Pharmaceutical Specialties is the means by which future specialties in pharmacy will be identified and recognized.

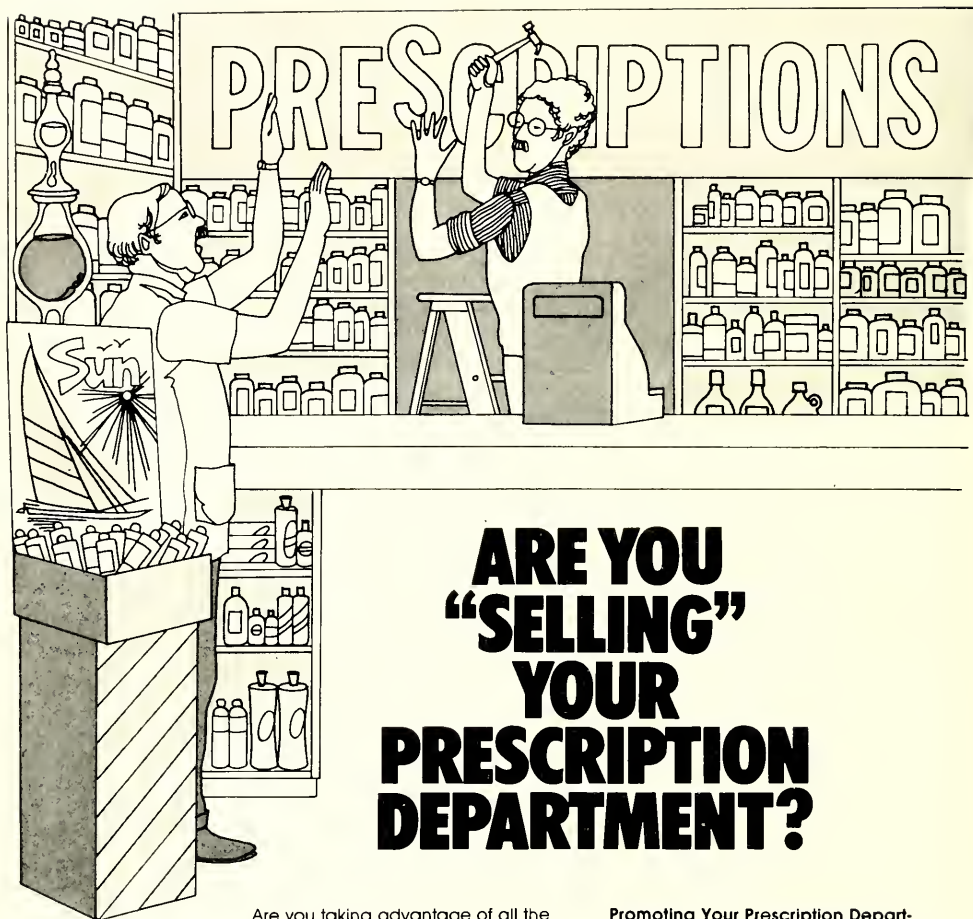
Seven criteria are used by the Board of Pharmaceutical Specialties in determining whether any specific area of pharmacy is a specialized one (2). The proposed area of

specialization must rest on a specialized knowledge of pharmaceutical sciences and not on the bases of managerial, procedural, or technical services, nor on the bases of environments in which pharmacists practice. It must represent an identifiable and distinct field of practice that calls for special knowledge and skills acquired by education and training, and/or experience beyond the basic pharmaceutical education and training. A reasonable number of individuals who devote most of the time of their practice to the specialty area should comprise the area of specialization. Once a specialty is recognized, a specialty council recommends standards and other requirements for certification and recertification of pharmacists in the specialty.

The dynamic, highly diverse nature of the hospital setting makes it especially suitable for the establishment of specialized roles for pharmacists. The scope and complexity of modern-day pharmacotherapy almost preclude the possibility of one individual undertaking all of the functions currently performed by hospital pharmacists. As clinical roles for pharmacists expand, so will the need for individuals specifically trained to address the problems of select patient groups and the needs of other health professionals. There are currently no formalized requirements for becoming a pharmacy specialist; as more areas of specialization are officially recognized, it may be assumed that specific educational and training guidelines will be established. Standardization of the education and training of pharmacists wishing to pursue a career in a certain specialty should produce professionals who are well-equipped to assume the increasingly more complex roles available to the pharmacist.

Although only nuclear pharmacy has been formally recognized as a specialty, there are several informally recognized specialized fields that involve hospital pharmacists (4). These fields, which correspond to the Special Interest Groups of the American Society of Hospital Pharmacists, include adult clinical pharmacy, ambulatory care pharmacy, clinical pharmacokinetic practice, oncologic pharmacy, drug and poison information practice, geriatric pharmacy, intravenous therapy practice, pediatric pharmacy, psychopharmacy, and administrative pharmacy prac-

(Continued on page 33)



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tice. The American College of Clinical Pharmacy recently announced its intention to petition for specialty status for clinical pharmacy (2). Whether clinical pharmacy, or indeed any of these individual hospital pharmacy specialties, will be able to meet the criteria for determining a specialty is not now known. However, the mere existence of these Special Interest Groups indicates the presence and obvious need for pharmacy specialists.

As with most controversial new ideas, the move toward specialization in pharmacy practice is not without its critics. One potential problem frequently cited by these critics is that such specialists will not want to "dilute their efforts" (1) by performing daily routine services. This charge may have been answered best by Donald E. Francke in his editorial, "Levels of Pharmacy Practice":

I would like to see the profession recognize that it does not require the training a pharmacist receives to perform the functions now performed by a large number of pharmacists; . . . trained pharmacy technologists, technicians, or dispensing assistants could competently perform 90 percent of what (these) pharmacists do. (5)

As the profession moves closer to the adoption of the Pharm.D. degree as the entry-level degree for pharmacists, pharmacy education may evolve in such a way that pharmacy technologists will receive training in most of the functions now performed by registered pharmacists. This move would result in the "importance and significance of the pharmacist (being) greatly enhanced because he would be trained to perform tasks which are now neglected" (5).

If pharmacy is to become a truly strong profession, careful attention must be paid to the development of professional specialists. As each area of specialization is identified and recognized, the specialists within each area must commit themselves to the advancement of the profession in the eyes of other pharmacists, allied health professionals, and the general public. It has been observed that references to pharmacists' role modification are rarely found in any non-pharmacy health journals (3). Communication and dialogue about future roles for pharmacists must be

established if new roles for pharmacists are to be accepted and effective. Care must also be taken to ensure that specialty areas which are recognized serve a genuine purpose in the scheme of health care and are not merely an attempt at medical elitism. Since a fair and accountable process exists for the designation of areas of specialization within the practice of pharmacy, it is easy to assume that the creation of these specialties will only enhance the already growing respect for pharmacists as vital members of the health care team.

References

1. Bowles, GC. "When everyone is a specialist, who will do the work of the hospital pharmacist?" *Mod Hosp* 119:126, October, 1972.
2. Penna RP. "Pharmacy's first specialty?" *Am Pharmacy* NS22(11):612-15, November 1982.
3. Barnett RL, Butler JL, DeLuca PP, Straus R. "How to prepare tomorrow's pharmacists for their new roles" *Pharm Times* 42:68-74, October 1976.
4. Ray MD. "Career opportunities in hospital pharmacy specialties?" *Tomorrow's Pharmacist* 3(4):9-11, April-May 1981.
5. Francke DE. "Levels of pharmacy practice." *Drug Intell Clin Pharm* 10:651-652, November 1976.

QUINIDINE

On several occasions the concentration of a drug in the saliva has been found to correlate with the plasma concentration of the drug. Various agents have been reported to be secreted in the saliva and correlations have been made between salivary concentration and plasma concentrations of digoxin, theophylline, barbiturates, phenytoin, procainamide, and some sulfonamides. Studies were designed to determine if quinidine levels could be obtained using this non-invasive technique. Investigators found no correlation between salivary and plasma levels of quinidine thus rejecting the hypothesis that quinidine activity can be monitored using this technique. *Clin Pharmacol Ther*, Vol 34, #5, p. 695, 1983.

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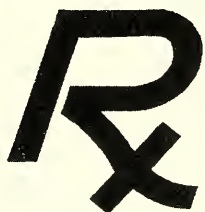
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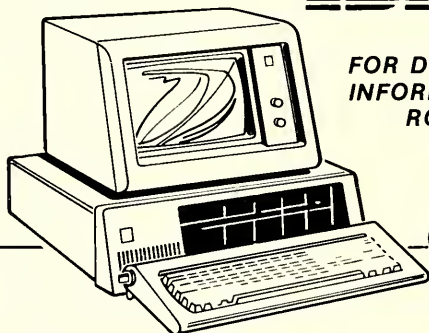


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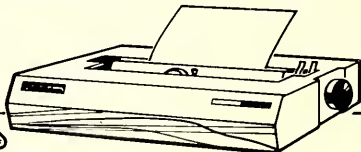


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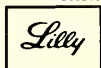
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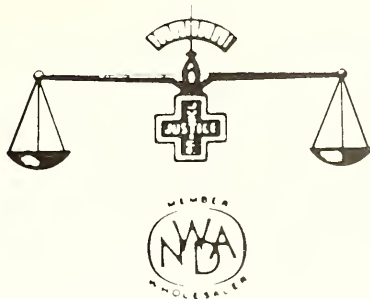
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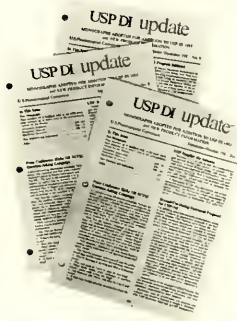
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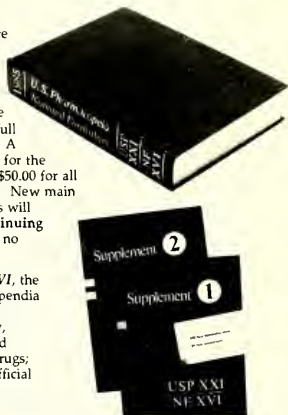
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WOMEN PHARMACISTS: ACTIVE, INACTIVE, OR INERT?

Charma A. Konnor

It is a pleasure to be here at the North Carolina Pharmaceutical Association's annual meeting. This is the first time that I have visited Chapel Hill, and it is as beautiful as everyone has said it is.

As you know, I was invited to speak to you on women in pharmacy. With more and more women entering the profession, concern has been expressed about the impact that women pharmacists will have on pharmacy. Phrased in pharmaceutical terms, we might ask: "As *ingredients* of our profession, are women pharmacists active, inactive, or inert? Will they be available and interact? Will their increasing concentration yield professional *solutions* or *dilute* the profession?"

Now, if any of you are entertaining the idea of taking a long bathroom break at this time—because you believe that you have heard enough about women in pharmacy, or because you prefer *not* to draw lines of distinction between women and men pharmacists, or because of my jokes—I urge you to stay put. As I proceed through this presentation, you will find that lines of distinction drawn between women and men pharmacists will become less distinguishable as we consider issues of concern to all of us as pharmacists.

Today 1 out of 5 pharmacists in the United States is a woman, and more than half of the pharmacy students are women. It has been predicted that, by the year 2000, the number of women practicing pharmacy will be more than twice the number in 1981. North Carolina's figures exceed the national average: women comprise 28% of its licensed pharmacists, 52% of the newly licensed pharmacists in 1983, and 63% of its pharmacy students.

With the increasing number of women entering the profession of pharmacy, concern arose in the mid-1970's over what impact this increase would have on the future practice of pharmacy. In 1979 the American Pharmaceutical Association's Board of Trustees appointed a Task Force on Women in Pharmacy to address this issue. In less than 2 years the

Task Force completed its work. The Task Force developed 12 recommendations as a result of input from the profession-at-large and the Task Force's deliberations. A summary report of its findings was widely distributed to various health organizations, government agencies, and Congressional committees. Several of the Task Force recommendations address gathering and reporting annual manpower data on all practicing pharmacists; developing women pharmacists as leaders, owners, and managers; providing career guidance to *all* pharmacy students; encouraging state associations to form their own task forces on women in pharmacy, with both women and men pharmacist members; and establishing an Office of Women's Affairs at APhA.

The latter recommendation—creation of an Office of Women's Affairs—was expeditiously acted upon by APhA's Board of Trustees. Subsequently, an advisory group to

(continued on page 7)



Jesse Pike and Charma Konnor

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WOMEN PHARMACISTS: (cont.)

the Office of Women Affairs was appointed, comprised of women and men pharmacists, and which I had the pleasure of serving on for 2 years. The purpose of the advisory group is to develop programs to implement the 12 recommendations of the Task Force, to serve as a sounding board, and to provide input from the practitioner's point of view. Primary emphasis has been placed on communications, publications, and networking. A pharmacists' network has been established, with the purpose of bringing pharmacists (men and women) together on a one-to-one, informal basis to share personal experiences, exchange information, and provide interpersonal support. Because of their rapidly increasing number, *women* pharmacists are particularly encouraged to avail themselves of this network to pool their resources and to help other pharmacists, as well as themselves.

Since finalization of the APhA Task Force report, additional study and formal research on women in pharmacy has continued. The National Association of Retail Druggists created its own Task Force for Women in Pharmacy in an effort to identify the special needs of women practicing in independent community pharmacies. NARD's Task Force strongly emphasized the need for women to become actively involved in local and national pharmacy organizations.

In October 1982, the National Center for Health Statistics released data that report the national census of pharmacists for 1978-1979, and are the most current national data available. According to the report, 1/3 of all active pharmacists under 30 years of age were women. Contrary to what some of us might expect, the percentage of inactive women pharmacists was close to the percentage of inactive men pharmacists: 17.5% women as compared to 15.3% men. It is interesting to note that data from individual researchers have closely coincided with the NCHS data. Those data seriously challenge the belief that women will contribute less to the profession than men because they are more likely to drop out. In addition, it was found that almost 54% of the nonpracticing pharmacists had plans to return to practice within the next 5 years, with a greater proportion of women than men planning to return to pharmacy practice. it

was also found that women work more hours than in previous years, and, of the women who drop out of work to bear and raise children, most of them *do* return to practice. It seems that, based on results from current research, it would be a mistake for us to judge today's woman pharmacist by the practice patterns followed by women pharmacists 10 years ago.

With regard to practice setting, many women pharmacists choose hospital pharmacy after graduation. Researchers from the University of Texas surveyed hospital pharmacists' perceptions of their work activities and found that women pharmacists spend significantly more time with the distributive functions of a pharmacy than men pharmacists. These same researchers suggested that "female pharmacists primarily involved with dispensing functions may be experiencing fewer opportunities for psychological achievement and success."

In looking at other practice patterns and attitudes, researchers who looked at women pharmacists in management found that *women* had a more favorable attitude toward women as managers than did men. It was also found that, as managers, women were found in hospital settings, but were underrepresented as managers in the community pharmacy environment. It has been predicted that with more husband and wife teams who are pharmacists, there will be more women in ownership roles through partnership arrangements. In your state, there are about 12 women pharmacist-owners.

With regard to salary, the November 1982 issue of *Drug Topics* reported that the average pay of women in retail pharmacy is lower than that of men, but explained that the gap may result less from salary discrimination than from the fact that there are fewer women in management. A Texas survey found that the average male pharmacist in Texas earns almost \$5000 more a year than the average female pharmacist. However, when average hours worked per week were included in the calculation, it was found that women are earning 15¢ more an hour than men. Since men pharmacists typically work longer hours, particularly in the retail setting, comparing gross salaries between the sexes can lead to the wrong conclusions.

Several state associations have named task
(continued on next page)

WOMEN PHARMACISTS: (cont.)

forces or committees on women in pharmacy, with their members consisting of both women and men pharmacists. These states are: Iowa, Minnesota, California, Texas, North Carolina, North Dakota, Oklahoma, and Virginia. In looking at the reports of the Iowa, Minnesota, Texas, and California task forces, one quickly realizes that their efforts have been not just for women pharmacists, but for the entire profession. Furthermore, the task forces are aware that many of the issues relating to women in pharmacy are the same as those that relate to young or new pharmacists.

A recommendation made by several state task forces is for a cooperative effort by state pharmaceutical associations, boards of pharmacy, and schools of pharmacy to collect data—or to broaden existing data bases—on demographics of pharmacy practice, salaries, benefits, hours worked, and supply and demand of pharmacists. Other recommendations have been made regarding role models, career counseling, career development, professional advancement, the public's image of women pharmacists and young pharmacists, and professional association involvement.

The Texas Pharmaceutical Association's Task Force on Women in Pharmacy commissioned 2 surveys: the first surveyed 1500 Texas pharmacists on job stress, job satisfaction, and salary comparison. The second surveyed all pharmacy students in the Texas College of Pharmacy. Some of the findings were:

- Texas pharmacists do not find a great deal of satisfaction from their jobs and were more satisfied when work was balanced with volunteer-type, outside activities that were professionally oriented. Job stress was found in all areas of pharmacy practice.
- A high stress/low satisfaction level was found among Texas chain store pharmacists—and the chains are a growing place of employment for pharmacists.
- Recruitment tactics often depict a narrow picture of career options in pharmacy and frequently emphasize pharmacy as a desirable career for women because of its part-time opportunities.
- Many students are not prepared to assume full responsibility when they be-

come licensed as pharmacists.

Now, we might ask ourselves what all this information that I've presented to you means—that is, what can women and men pharmacists do for pharmacy, what can pharmacy do for pharmacists? What should your state association do? In response, I am going to propose to you several courses of action that can be pursued by pharmacists, pharmacy schools, and pharmacy associations:

- Plan and direct seminars toward the career growth of the pharmacist and also present tools to cope with job stress.
- Offer courses that involve practitioners as instructors. The practitioners should be from hospital, independent, and chain practice *and* from government and industry. The courses could illustrate situations that occur in various practice settings (including government and industry) and suggest solutions to these situations.
- Offer seminars on changing management styles and techniques to illustrate progress and changes in this area. I see that NCPHA's Committee on Employer/Employee Relations has taken a step in this direction by recommending that management training courses be made available for students in the school of pharmacy and for practitioners through continuing education programs.
- When situations with levels of high stress and low satisfaction are found, association councils could discuss these situations and propose ways to alleviate them.
- Change recruitment tactics to emphasize pharmacy as a full-time career and to minimize part-time opportunities. We are not a part-time profession! If pharmacy is depicted as a desirable career because of its part-time opportunities, women and men who want full-time careers may pursue careers other than pharmacy.
- Develop and present seminars for students and practitioners that offer workable solutions to dual careers and job duties that conflict with family responsibilities.
- Present recruitment information on areas of pharmacy that include manufacturing, research, consultant, education, sales, association, and government

WOMEN PHARMACISTS: (cont.)

as well as hospital, chain, and independent pharmacy practice. Make pharmacy students aware of career options. Sponsor seminars for students early in their academic career that show career options and the variety of pharmacy practice settings.

- Give presentations at career day programs; take an active part in recruiting students in your hometown.
- Be a preceptor and a role model—and conduct yourself accordingly. Involve your students in local association meetings and other professional organization activities.
- For those associations located near colleges of pharmacy, invite and encourage student participation in community activities such as health fairs and career days.
- Look into ways to help inactive pharmacists maintain or re-gain their competency so that they may re-enter pharmacy practice.
- Create a roster of pharmacists-owners who are willing to give peer support to prospective owners. Successful women and men are needed to encourage *women*, in particular, to move beyond being employee or staff pharmacists and to become managers or owners of pharmacies. If this does not happen, our profession will suffer in the future with a shortage of managers and owners.
- Through your state association, establish a state-level networking system, and broaden its base by interacting with APhA's Office of Women's Affairs.
- Be alert to new pharmacy graduates in your area. Recruit them into your local associations and encourage them to be active.

With regard to pharmacy associations, it has been noted that many students (men and women) formerly active in student pharmacy associations do not continue their participation in state associations after graduation. In addition, it has been observed that the number of women involved in associations at the local, state, and national levels is low in proportion to the increasing number of

Problem Solvers

Congratulations to the first two pharmacists who identified W. H. Green, William Simpson, A. S. Lee, E. M. Nadal and E. H. Neadows as the first Board of Pharmacy.

*J. Marshall Sasser—Smithfield
Bill Oakley—New Bern*

women in the profession. New pharmacists, particularly women pharmacists, should be encouraged to lead and to be as involved in pharmacy organizations as when they were students. A professional identity is important to us as professionals. Developing relationships with our peer group and our colleagues is critical.

Many of the recommendations that I made have been proposed by state task forces and are being pursued. As pharmacists—men and women—we need to support our profession by being involved and determining future standards of practice and the direction of our profession. The degree to which we make ourselves available to act and interact will characterize ourselves—and ultimately our profession—as active, inactive, or inert.

Before I close, I would like to invite and encourage all of you to attend, and to participate in, the American Pharmaceutical Association's Annual Meeting in Montreal, May 5–10. The theme of the annual meeting is "Technology 2000," and some of the programs deal with personal computers, AIDS, pharmacists against drug abuse, women in pharmacy management, personal financial management, diabetes technology, long-term care and hospital practice, many scientific presentations, and many more programs. We look forward to seeing you in Montreal.

Also, your state association is offering a workshop on interviewing this afternoon. This program will be for both interviewers and interviewees and will be informative to employers and important for them to attend. The how to's of interviewing and its legal aspects will be covered.

Thank you for giving me the opportunity to speak to you. It has been a pleasure. Hope to see you in Montreal.

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"There has never been a prouder time to be a pharmacist."

HOOD RECEIVES "BOWL OF HYGEIA" AWARD

Kinston pharmacist John C. Hood Jr. has been honored by the North Carolina Pharmaceutical Association as its 1984 recipient of the A. H. Robins "Bowl of Hygeia" Award for outstanding community service by pharmacists.

Hood, owner of J. E. Hood & Company at 110 East Gordon Street, received the award this afternoon during the association's annual meeting in Chapel Hill.

Making the presentation was Michael E. Winters, manager of the Carolina Division of A. H. Robins Company. Participating in the ceremony was David D. Claytor of Greensboro, president of the North Carolina Pharmaceutical Association.

Hood's community activities have included service as chairman of the Lenoir County Board of Health and the United Fund campaign, president of the Jaycees and the Rotary Club, and a director of the Kinston Arts Council. He is a member of the Westminster Methodist Church where he has served as a trustee, Sunday school teacher and chairman of the stewardship committee.

In pharmacy, Hood is a member and past president of the North Carolina Pharmaceutical Association and a member of the North Carolina Pharmacy Foundation Board. He also is a member of the Lenoir County Pharmaceutical Association, the North Carolina Academy of Pharmacy, the American Pharmaceutical Association and the National Association of Retail Druggists. He received his training in pharmacy at the University of North Carolina.

The Bowl of Hygeia, most widely recognized international symbol of pharmacy, derives from Greek mythology.

Hygeia was the daughter and assistant of Aesculapius (sometimes spelled Asklepios), the God of Medicine and Healing. Her classical symbol was a bowl containing a medicinal potion, with the serpent of Wisdom (or guardianship) partaking of it. This is the same serpent of Wisdom which appears on the caduceus, the staff of Aesculapius which is the symbol of medicine.

The "Bowl of Hygeia" Award, is a handsome mahogany plaque measuring 10 by 13 inches and featuring the Bowl of Hygeia cast in

bronze. It is modeled after a sterling silver bowl made by a Mexican silversmith and given to the A. H. Robins Company by its Latin American representatives in 1953.

A desire to encourage pharmacists to take active roles in the affairs of their respective communities prompted E. Claiborne Robins, chairman of the board, to establish the award in 1958. It is now presented annually by participating pharmaceutical associations in each of the United States, the District of Columbia, Puerto Rico and the provinces of Canada. The recipients are selected by their respective associations.



John C. Hood, Jr.

Photo by Colorcraft



Robert J. Allen, Historian of the NC Society of Hospital Pharmacists, presents the Meritorious Service Award to Dr. Gilbert C. Colina, in recognition of his role in founding the Society. The award was presented in Charlotte at a dinner in Dr. Colina's honor.

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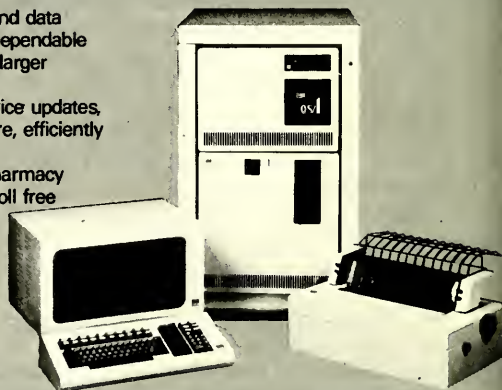
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The National Center for Independent Retail Pharmacy, a service of the National Association of Retail Druggists, announces a major new program in drug abuse education, prepared by pharmacists for pharmacists. More than a year in preparation, the drug abuse education program will provide pharmacists with a self-paced continuing education experience and an audio-visual package that will help elicit community support to address this nationwide problem. Eli Lilly and Company is providing general corporate support for the program.

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- It encourages the pharmacist to elicit community support in dealing with the drug abuse problem, through the use of a provocative audio-visual presentation.
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community-oriented presentations via speeches, newsreleases, and the like which will increase his/her visibility as a businessperson and caring health professional.

The objective of the program is to train a cadre of independent pharmacists to attack the drug abuse problems in their communities.

MOORE COUNTY

The annual banquet of the Moore County Pharmaceutical Association was held Saturday night, May 5, at the Manor Inn in Pinehurst. New officers are Dale Tysinger—President, Bob Bedingfield—vice-president, Jan Musten—Secretary, and Richard Knight—Treasurer. Musten and Knight were re-elected. The Moore County Pharmaceutical Association was reorganized two years ago.

DURHAM-ORANGE

New officers of the Durham-Orange Pharmaceutical Association for 1984-85 are Keith Caviness—President, Betsy Barnes—Vice President, Loni Garcia—Secretary Treasurer. DOPA has established the Durham-Orange Pharmaceutical Association Loan Fund through the Consolidated Student Loan Fund of the North Carolina Pharmaceutical Association.

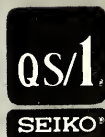
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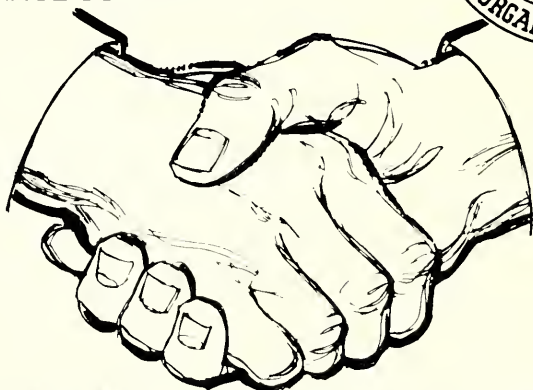
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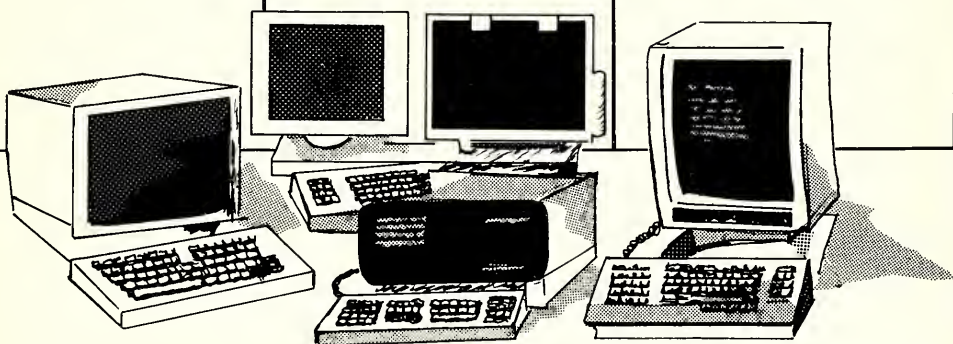
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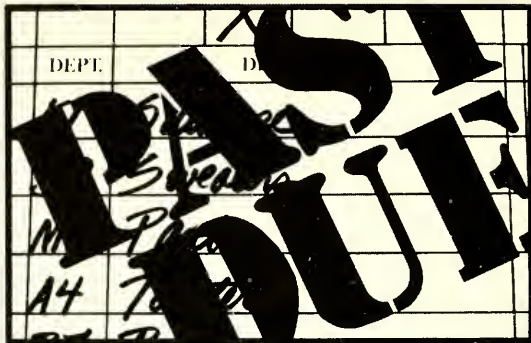
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REPORT OF THE STUDENT BRANCH OF THE NCPHA AND THE STUDENT APhA

presented by JEFFREY D. SHATTERLY, PRESIDENT
at the 104th Annual Convention of the NCPHA, April 9, 1984, Chapel Hill

The Student Branch of the North Carolina Pharmaceutical Association has had a successful year here at UNC. The year began with a membership drive which resulted in a total of 81% of the student body in Pharmacy School as members. This earned our chapter a \$25.00 award and plaque from the Student APhA National Office, and we were one of 25 Student APhA chapters recognized as reaching and surpassing our goal of 75% membership. The Annual Cookout was held in September at Storybook Farm, and everyone enjoyed this a lot before the rigors of academics began to make demands on students' time and energy.

In October ten students from UNC attended the Student APhA Midyear Meeting held at the University of Georgia in Athens. For the second year in a row the Region III Alternate Delegate was elected from our chapter. New this year was the initiation of a Pre-Pharmacy Club for students in their freshman or sophomore years of school, or for others interested in pharmacy. This proved very successful and helped ease some of the anxieties associated with the transition into pharmacy school. Gloria Velasquez deserves much credit for the success of this, and hopefully this can be continued in future years.

In terms of community service projects, the two major events held this year were similar to the traditional clinics held in past years. These were the Diabetes Screening and Hypertension Screening Clinics held at shopping malls in the Chapel Hill and Durham areas. These were held in cooperation with the Kappa Psi Fraternity, and Lisa Hoover (Diabetes) and Kevin Miller (Hypertension) worked to make these a big success!

In order to raise funds for chapter projects

and defray costs of travel to meetings, our chapter sold two books to students this year, the Handbook of Nonprescription Drugs and the USP/DI and advice for the patient. Currently an aluminum can drive in the Beard Hall lounge and a T-shirt sale are being used as fund-raisers. Anna Ferguson and Sonya Lewis deserve credit for these projects!

At our monthly chapter meetings this year we featured speakers including Joe Graedon, author of the People's Pharmacy, and Mr. David Claytor and Mr. Al Mebane. Currently new officer elections are being held, and sixteen students from UNC's School of Pharmacy will attend the Student APhA Annual Meeting in Montreal, May 4-8. These meetings are always a lot of fun, and provide an opportunity for students to learn about other colleges and schools of pharmacy and their activities. Hopefully our chapter will receive some recognition at the NPC Chapter Awards Banquet for our yearly activities. All schools which have active Student APhA Chapters will be competing for the Chapter Achievement Award.

I would like to thank the many members of the North Carolina Pharmaceutical Association who support and help provide the fine facilities at the Institute of Pharmacy. Unlike many Student Branches, UNC's pharmacy students have always been able to enjoy the advantage of the institute whether it be for advice or for help in other needs. I would also like to thank Mr. Mebane, Mrs. Cocolas, Mrs. Mebane, Mrs. Stump, Mr. Claytor, Dr. Shrewsbury, Dean Miya, and Dr. Cocolas at the Institute or at the School of Pharmacy for their support of all of the Student Branch and Student APhA Chapter activities in the past year.



Research Triangle Park, NC—James Zemonek has recently been graduated from an intensive sales training course as the final phase of a 30-week program for the position of Sales Representative for Burroughs Wellcome Co.

Zemonek received a B.S. degree in Marketing from Radford University. He will be based in Hickory, NC.

Burroughs Wellcome Co. researches, develops and manufactures pharmaceutical products for human and animal use. The company's corporate headquarters and research laboratories are in Research Triangle Park, North Carolina.

DEA PHARMACIST'S MANUAL

The latest revised edition of the *Pharmacist's Manual*, an outline of the Controlled Substances Act of 1970, is now available at no charge from the branch office of the Drug Enforcement Administration office in Atlanta, or the North Carolina Board of Pharmacy in Carrboro. The 38-page booklet covers such subjects as symbols and labeling, registration, record keeping, drug theft, drug security, inventory requirements, and forged prescriptions, to name just a few of the sections. You may write:

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DECENTRALIZATION: THE WAY TO OPTIMIZE THERAPY**Susan Stone****May 6, 1983****Institutional Pharmacy Practice**

In deciding how to optimize pharmacy service in the institutional setting, one must analyze the purposes and goals of the hospital and expand pharmacy services in accordance with those institutional goals. Since the primary objective of a hospital is to provide quality patient service, decentralization of pharmacists is the method in which this profession can best contribute to patient care.¹ This moves the pharmacist into a more patient-oriented service although he remains the member of the health care team whose duties center around drug distribution and dissemination of drug information. Thus, these services are more accessible to physicians and nurses as well as patients.

Decentralization is defined as the locating of the pharmacist so that he can interact directly with patients and health care personnel and have direct access to the medical records.² The pharmacist works on the floor with the nurses to handle all problems with medication orders, assign medication administration times, check orders, round with physicians to become informed on each patient's status in order to optimize drug therapy and to serve as a liaison between central pharmacy and the nursing floor and between other health professionals. With this arrangement, the pharmacist is available to answer questions face-to-face on the unit, to observe administration of medications, and to check the appropriateness of the order and verify that the medication sent to the nursing unit is in the correct dosage form and strength. He supervises the pharmacy technician on the unit (if one is assigned to the unit) and responds to immediate needs for medications. Clinical services can easily be provided: taking patient drug histories, providing teaching services, performing discharge counselling, conducting drug utilization reviews and quality assurance services, and reporting adverse drug reactions.³

The pharmacist's knowledge of drugs enables him to tell central pharmacy exactly what needs to be sent to the floor. He can specify the vital information necessary for

the drug information pharmacist to answer those questions he can not answer without further reference. Thus miscommunication is lessened since both parties communicate with the same terms from the common knowledge base of pharmaceutical sciences. The topic is sufficiently narrowed so that less time is spent with extraneous information; the response is available much more quickly.

The pharmacist monitors drug therapy as it proceeds and has greater access to patient information (charts and observations) that may impact on drug therapy. Drug history interviews are conducted to obtain patient-specific information. In these ways, drug-drug and drug-disease interactions should be detected much more frequently since the pharmacist is trained to evaluate such occurrences and would be available to constantly evaluate therapy to detect these.

Rounding with physicians facilitates flow of information between physicians and pharmacists and other health care professionals (dietitians, respiratory therapists, physical therapists, etc.) who are involved with a particular patient's care. The pharmacist obtains diagnostic and prognostic information and treatment plans firsthand. He is then in a position to aid in selection of a drug product. If patient variables change, he is immediately available to assist in modifying treatment.

Perhaps the greatest improvement concerning the health care team would be the savings of nursing time spent in drug-related activities; this time could be diverted toward patient contact to enhance nursing satisfaction in the job. Also, with the nursing shortage, pharmacy is in the position to help alleviate the problem through utilization of innovative services, especially if services are decentralized. The pharmacist would validate the physicians' medication orders, assign administration times, contact central pharmacy, check the medication as it comes up to the unit, and detect possible incompati-

(continued on next page)

DECENTRALIZATION: (cont.)

bilities that could be easily overlooked by nursing prior to drug administration, thus avoiding an adverse reaction. Since the pharmacist reports medication errors, nursing time is saved by eliminating this task previously delegated to her. (In fact, medication errors may increase secondary to the nursing shortage since the RN would have less time to devote to each patient's medications due to the workload.)⁴ Through pharmacist participation and availability on the unit, not only does nursing benefit but drug therapy moves toward the ideal.⁵

Vital in implementation of this decentralized system is the pharmacists' perception of and participation in such a system. Since the pharmacist is more directly involved and has patient contact through the processes of rounding and activities on the nursing unit, his feeling of responsibility should be heightened. He can foresee the impact of his decisions and the information disseminated to

the other health professionals on a particular patient through observation of that patient. Full utilization of pharmaceutical knowledge in all areas will increase job satisfaction and motivation. Pharmacists feel more useful as they communicate knowledge, detect problems in drug therapy, and participate in total patient care since they have been educated with an emphasis on clinical aspects of practice.^{6,7,12} With successful completion of each task performed, satisfaction increases, and with the opportunity to observe results, the pharmacist senses that his time is more efficiently spent to directly benefit the patient.^{8,9,10}

The patient also comes to view the pharmacy profession in a different light. He realizes that the pharmacist can perform a much greater service than "just count pills." In this manner, public opinion is greatly enhanced and acceptance of pharmacists as health professionals with a vital role in health care should increase.^{2,7} Apple suggest that the

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profession explain the economic cost and value of services and products provided to the patient to decrease the distance and the public;¹¹ the process of decentralization moves toward communication of this.

Integral to this expansion of pharmacy services is the cost-benefit of such a move and the ability of the new program(s) to ultimately contain the increasing health care costs. Pharmacists must 1) demonstrate their knowledge and extend their resources to all levels of health care, 2) advance rational, patient-oriented drug therapy in institutions that can reap benefit from clinical and drug utilization functions of a pharmacist as an integral part of the health care team, 3) help facilitate communication and extend influence by forming a liaison with other professionals, and 4) extend influence into the community by offering needed programs.¹³ In order to achieve these objectives, decentralized pharmacies offer the greatest opportunity. Jeffrey considers this system and the service it renders the responsibility of the pharmacy profession,¹⁴ and it provides further attractiveness in that it has also demonstrated the ability to decrease costs in the long run.^{15,7,16,14}

Despite the advantages, disadvantages of decentralization do exist. Hindrances to implementation and acceptance of this system are 1) nurses' and physicians' fear of pharmacists invading their territories, 2) possible increase in number of staff positions, primarily increasing costs of personnel, and 3) problems with staffing (deciding who will serve in the more rewarding decentralized positions). However, nursing and physician acceptance have been good.⁷ Once the pharmacist is working on the unit, he is well utilized, and health professionals welcome his presence. The increase in pharmacy personnel is most likely the result of transfer of nursing positions, and the overall increase in institutional positions is negligible. Staffing problems must be handled by the director of pharmacy with as much tact as possible, and his decision must be accepted by the pharmacy department as the one in agreement with goals of this department.²

Other disadvantages that pose problems for management are 1) increased challenge to administration to insure quality control of products and practice and 2) decreased direct

supervision due to greater distribution area of pharmacy personnel. Surmounting these require efficient management that seeks qualified employees and strives to be informed and facilitate communication.² It is vital that communication between the decentralized posts and central pharmacy be open and frequent for the system to operate efficiently. Administration should be aware of problems in both areas and work toward refining operations and facilitating cooperation within the pharmacy as well as within the institution.

In summary, the advantages of decentralization outweigh the disadvantages for all types of institutions. The potential for pharmacy to contribute to patient care increases due to the clinical orientation of pharmacy education today, and decentralized posts allow the pharmacist to utilize this knowledge to a much greater extent. Today's pharmacists are seeking a challenge, looking for opportunities, and desiring satisfaction from their chosen profession.¹⁷ Decentralization provides the means to enhance pharmacy's contribution to patient care in the future as the profession becomes more involved with monitoring drug therapy and providing sup-

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DECENTRALIZATION: (cont.)

port and drug information to other health care practitioners. It must be kept in mind that decentralization presents a challenge to the pharmacist to attempt to be well informed of new developments in drug treatment, and it is a responsibility that the pharmacist be alert and strive to optimize therapy to benefit the patient. Through direct involvement of the pharmacist on the nursing units, health care and pharmacy move toward the goal of providing the best health care.

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ALCO HEALTH SERVICES NAMES PRESIDENT OF STROTHER DRUG COMPANY

Alco Health Services Corporation announces the appointment of Ronald E. Carey as President of Strother Drug Company, Lynchburg, Virginia. He succeeds Joseph C. Klein, now serving as Chairman and Chief Executive Officer of Strother.

Mr. Carey most recently was Vice President and General Manager of Strother's Justice Drug Division, Greensboro, North Carolina and has over thirty years of experience in the pharmaceutical distribution business.

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**RESOLUTIONS ADOPTED AT THE THIRD NCPHA BUSINESS SESSION
TUESDAY AFTERNOON, APRIL 10, 1984, HOTEL EUROPA, CHAPEL HILL, NC**

COMMITTEE MEMBERS

**ROBERT J. ALLEN, RALEIGH—CHAIRMAN
W. ROBERT BIZZELL, KINSTON
W. KEITH ELMORE, WILMINGTON
WILL M. HARDY, KINSTON
AL F. LOCKAMY, RALEIGH**

Resolution No. 1

Short Title: Resolution of Appreciation

WHEREAS: The 1984 annual convention of the North Carolina Pharmaceutical Association and affiliated auxiliaries, held in Chapel Hill, April 8, 9, and 10, was well planned and executed, and

WHEREAS: it has been an enjoyable, pleasant, and informative meeting for all participants, and

WHEREAS: much effort and hard work has been expended by the members of the Chapel Hill Woman's Pharmaceutical Auxiliary to ensure the success of this meeting,

BE IT RESOLVED THAT, sincere appreciation be extended to the program participants and local committee members, and

BE IT FURTHER RESOLVED THAT, special recognition be expressed to Bill and Marilyn Edmondson, convention co-chairmen, for the many hours they have put into the successful planning of this convention, and

BE IT FURTHER RESOLVED THAT, grateful recognition be given to the North Carolina Wholesale Druggists, the Traveling Members Auxiliary, the convention supporters and other contributors who helped make this 104th convention one of the most productive and informative in recent memory.

ADOPTED: Yes, Unanimous

Resolution No. 2

Short Title: NCPHA/NCSHP Cooperative Relationship

WHEREAS: the profession of pharmacy's interest in North Carolina can best be met through cooperation of all pharmacy organizations, and

WHEREAS: the services that a pharmacist can provide to the citizens of North Carolina can be enhanced by the cooperation of all pharmacy organizations,

BE IT RESOLVED THAT, the North Carolina Pharmaceutical Association recognizes the cooperative relationship that has developed between the North Carolina Society of Hospital Pharmacists and the North Carolina Pharmaceutical Association, and

(continued on page 27)

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RESOLUTIONS: (cont.)

BE IT FURTHER RESOLVED THAT, the benefit of having the NCPHA provide contract services to the NCSHP is recognized and has been helpful in the cooperative relationship which has developed between these two organizations, and

FINALLY BE IT RESOLVED THAT, the presidential officers of both organizations for the past few years should be commended for developing this cooperative attitude between the NCPHA and NCSHP.

ADOPTED: Yes, Unanimous

Resolution No. 3

Short Title: Commendation to Joint Board of Pharmacy Regulations Committee

WHEREAS: the North Carolina Board of Pharmacy formed an Ad Hoc committee to develop regulations governing the practice of institution pharmacy, and

WHEREAS: this committee convened for twelve day-long meetings during an eighteen month period to develop and discuss these regulations, and

WHEREAS: the regulations promulgated as a result of this committee's effort are contemporary in practice and dynamic in structure,

BE IT RESOLVED THAT, the North Carolina Pharmaceutical Association commend committee members Jim McAllister, Bill Adams, Harold Day, Bob Dever, Jack Upton, John Smothers, Ed Frenier and David Work for a comprehensive effort of the assigned task.

ADOPTED: Yes, Unanimous

Resolution 4

Short Title: Commendation to Paul Bissette and W. T. Sawyer

WHEREAS: the Pharmacy Practice Act did not address the practice of institutional pharmacy, and

WHEREAS: the North Carolina Board of Pharmacy is responsible for interpreting and administering the various rules and regulations of the Pharmacy Practice Act as they apply to institutions, and

WHEREAS: the practice of pharmacy in institutions and interpretation and administration of the rules and regulations governing such practice is of interest to pharmacies in all practice settings,

BE IT RESOLVED THAT the North Carolina Pharmaceutical Association commend Paul Bissette and Bill Sawyer for resolving the differences of opinion and subsequent modification in the rules and regulations affecting institutional pharmacy practice.

ADOPTED: Yes, Unanimous

(continued on next page)

RESOLUTIONS: (cont.)

Resolution No. 5

Short Title: Commendation to Ad-Hoc Constitution and By-Laws Committee

WHEREAS: Pharmacy is an ever-changing profession, and

WHEREAS: the North Carolina Pharmaceutical Association in its capacity of serving Pharmacy and pharmacists must be cognizant and willing to change as the profession changes, and

WHEREAS: these changes are effected by reviewing and updating the Constitution and By-Laws which govern the Association,

BE IT RESOLVED THAT, the North Carolina Pharmaceutical Association commend the members of the Ad-Hoc Committee on the Constitution and By-Laws for the work that they have done in reviewing and updating the Constitution and By-Laws of the Association.

ADOPTED: Yes, Unanimous

Resolution No. 6

Short Title: Appreciation to Ed Nye

WHEREAS: the North Carolina Pharmaceutical Association has had a need for a professional lobbyist to closely watch over its Legislative interest, and

WHEREAS: Mr. Edd Nye is an extremely qualified individual for such an important position, and

WHEREAS: Mr. Nye agreed to perform said duties and did so with a great deal of professionalism and success,

BE IT RESOLVED THAT, the North Carolina Pharmaceutical Association thank Mr. Nye and show its appreciation for a job well done.

ADOPTED: Yes Unanimous

Resolution No. 7

Short Title: APhA Task Force on Women in Pharmacy

WHEREAS: the pharmacy profession has not escaped the tremendous socio-economic changes affecting women in the labor market, and

WHEREAS: pharmacists themselves have expressed concern about the changes occurring as more women enter the profession, the myths regarding women's commitment as practitioners and their involvement in the organizational structure, and

WHEREAS: the APhA has deemed it appropriate to appoint a National Task Force on Women in Pharmacy, and has adopted its recommendations, and

WHEREAS: the majority of newly licensed pharmacists and new NCPHA members are women,

BE IT RESOLVED THAT, the NCPHA formally recognize, adopt and implement the applicable recommendations of the APhA Task Force on Women in Pharmacy, herewith attached.

ADOPTED: Unanimously as amended

APhA TASK FORCE RECOMMENDATIONS

At its Annual Meeting on March 29, 1981, the A.Ph.A. accepted a report of the Task Force on Women in Pharmacy. The Task Force Committee included Estelle Cohen, the Consumer member on the Maryland Board of Pharmacy. A copy of the complete report is available from the Association office. The major recommendations of the report are summarized below.

1. An Office of Women's Affairs should be established by APhA.
2. The profession of pharmacy must develop a mechanism for gathering and reporting annual manpower data on practicing pharmacists.
3. Women pharmacists should insist they be paid equally with men for equal work and responsibility, and men pharmacists must encourage and support this expectation.
4. State pharmacy organizations should make a long-term commitment to getting women pharmacists actively involved in their committees and to ensuring that women pharmacists are encouraged to seek out elected offices and other leadership positions.
5. Each state association should give strong consideration to forming its own task force on women in pharmacy with representation of both men and women pharmacists.
6. Qualified women pharmacists should be encouraged to seek out ownership or management positions in their practice environments so they can be more influential in determining the future standards of pharmacy practice.
7. Efforts should be made to encourage more women pharmacy graduates to continue their education in graduate or advanced professional degree programs.
8. Efforts should be made to encourage more women pharmacy graduates to pursue careers in pharmacy education as tenure track faculty members in the clinical, administrative and basic science areas.
9. Representatives from the pharmaceutical industry must take the initiative to make pharmacy school faculty more aware of the expanded career opportunities that are available to pharmacy school graduates. Likewise, pharmacy school faculty, through an active career counseling program, must take the initiative to make students aware of these opportunities.
10. Schools of pharmacy should take a serious look at the nature and extent of career guidance they make available to their students and take steps that ensure their faculties are accurately informed about the career options open to a pharmacy school graduate. Guidance in career preparation should be an ongoing component of a school's counseling program.
11. Recruitment materials for the profession should be updated to stress a more career-oriented role for women and to minimize the focus on opportunities for part-time employment.
12. Advertisements via any media in which a pharmacist is presented or depicted should use a woman on a regular basis to represent the pharmacist.

(continued on next page)

RESOLUTIONS: (cont.)

Resolution No. 9

Short Title: Mandatory Continuing Education (From the Committee on Continuing Education)

WHEREAS: the Pharmacy Practice Act permits the North Carolina Board of Pharmacy to mandate continuing education, and

WHEREAS: a need exists among the state's pharmacists to be informed of new developments in pharmacy and medicine

BE IT RESOLVED THAT, the North Carolina Pharmaceutical Association endorse implementation of mandatory continuing education with the attendant standards of quality and safeguards against undue hardships.

BE IT FURTHER RESOLVED THAT, the North Carolina Pharmaceutical Association should seek to assure that the continuing education required by the Board of Pharmacy is broad enough in scope to meet the varied practice setting needs of North Carolina's pharmacists.

ADOPTED: Passed

Resolution No. 10

Short Title: Pharmacist Administration of Drugs

WHEREAS: the Pharmacy Practice Act of 1982 contained wording to permit qualified pharmacists to administer drug products to patients, and

WHEREAS: pharmacists in selected practice settings are involved in the administration of drug products to patients, and

WHEREAS: the public health, safety and welfare will benefit through increased activity in the administration of drug products by qualified pharmacists,

BE IT RESOLVED THAT, the North Carolina Pharmaceutical Association recommend that the North Carolina Board of Pharmacy initiate action to accomplish the intent of GS Article 4, § 90-54 (18), and adopt rules and regulations jointly with the Board of Nursing and Board of Medical Examiners to allow pharmacists who have received special training to administer drugs pursuant to a specific prescription order.

ADOPTED: Adopted

Resolution No. 11

Short Title: Formation of a Third Category of Drugs

WHEREAS: there is a trend towards switching legend drugs to OTC status, and

WHEREAS: the pharmacists of North Carolina are concerned with the adverse effects of these medications on an unknowing public, and

WHEREAS: the complexities of these drug's effects, both beneficial and detrimental, require consultation of a health professional with patients taking these medications, and

WHEREAS: pharmacists are the most accessible of all health professionals,

BE IT RESOLVED THAT, the North Carolina Pharmaceutical Association should pursue all avenues possible, both state and federal, to establish a third category of drugs in which certain of the drugs removed from Legend status will be placed.

BE IT FURTHER RESOLVED THAT, this third category of drugs should only be dispensed by a pharmacist.

ADOPTED: passed

Resolution No. 12

Short Title: Exhibit Program at NCPHA Convention

WHEREAS: the continuing exposure of pharmacists to new drug products, computers, general supplies, etc. is a valuable and necessary part of keeping pace with our profession,

BE IT RESOLVED THAT, the NCPHA should pursue the active participation of manufacturers, distributors, and/or marketers of the above noted products, to be displayed in an orderly manner via an Exhibit Program at the NCPHA Annual Convention.

ADOPTED: Passed



David Griffin

David L. Griffin has been assigned to the Charlotte territory for The Upjohn Company. He recently completed initial training at The Upjohn Company Learning Center in Kalamazoo, Michigan. This is part of an extensive training program for all new Upjohn sales representatives. Dave is a pharmacy graduate of the University of North Carolina at Chapel Hill.



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REDUCTIONS IN THE COST OF ILLNESS DUE TO THE INTRODUCTION OF NEW PHARMACEUTICALS

by

Cotton M. Lindsay, PhD
Professor and Director of Research
Department of Economics
Emory University

Net savings due to new prescription medications can be substantial. Savings attributed to pharmaceutical therapy used in five major diseases together totaled \$47 billion. In each of the last five decades pharmaceutical products have been introduced which produce large and documented reductions in the total cost of illness. These results support the conclusion that with responsible regulatory reform, coupled with incentives to enhance research and development efforts within the pharmaceutical industry, large potential gains can continue to be expected in the future.

Purpose

The impact of prescription pharmaceutical therapy on total health care costs has been largely overlooked because expenditures for pharmaceuticals account for only 5 percent of total health care spending. In addition to offering the sick and the disabled a faster and often safer return to health and a productive life, pharmaceutical therapy can have a profound effect on the total cost of treating illness. Pharmaceutical therapies have saved money by greatly shortening or eliminating the need for hospitalization. They are occasionally substituted for extensive surgery. Pharmaceuticals have also reduced the indirect costs of illness.

The cost of disease may be subdivided into direct costs (those directly associated with treatment) and indirect costs (all other costs). Indirect costs include lost productivity resulting from disability and death, and the cost of pain and suffering. Much concern has been expressed about spiraling health care costs and the rising share of the gross national product consumed by health care. What is rising, however, is merely the cost of treatment of disease. More resources are being devoted to hospital care, physician and nursing care, and pharmaceuticals.

Overlooked, however, are the effects of these increased expenditures in reducing indirect costs. Expenditures for treatment will generally produce some reduction in absenteeism from jobs and some relief from misery and pain. It is therefore possible that we have experienced a net reduction in the total cost of ill health although health care costs have been increasing.

The purpose of Dr. Lindsay's paper is to demonstrate that pharmaceutical developments achieve assignable health care cost reductions. Dr. Lindsay surveyed the literature to identify the cost reductions associated with the development of particular medications. This survey indicates, by example, the magnitude of the economic and therapeutic revolutions produced by all pharmaceutical discoveries, and demonstrates the value of medicines in the delivery of cost-effective health care.

Findings

To quantify the cost reductions associated with pharmaceutical therapy, the author took as a model Weisbrod's methodology for estimating the total cost of illness. Weisbrod had focused attention on three areas: (1) loss of output due to premature death; (2) loss of output to morbidity; and (3) treatment cost of the disease. Weisbrod chose to develop a very conservative estimate of the net social value of life (and thus the cost of premature death); that is, the present value of the output the patient supplies to others. Weisbrod's estimates also severely understate the cost of morbidity of disease. Recognizing the difficulty of assigning a cost to pain and suffering, he limits the cost of morbidity to lost productive time; that is, days away from employment and/or lost production in the home.

(continued on page 35)

**EXPENDITURES FOR SELECTED MAJOR MEDICAL SERVICES
BY PROGRAM CATEGORY
For Fiscal Year 1982**

Type of Service	Total	Aged	Blind	Disabled	AFDC Children	AFDC Adults	Other Children
Inpatient Hospital	\$122,623,120	\$ 17,468,890	\$1,101,997	\$ 47,774,920	\$30,120,466	\$24,977,683	\$ 1,209,164
Outpatient Hospital	13,240,371	1,597,495	106,791	3,357,017	4,361,302	3,646,823	170,943
Skilled Nursing							
Home	80,003,562	67,842,133	990,829	10,960,979	8,255	22,864	178,052
Intermediate Care—							
General	86,005,133	75,405,216	1,432,980	9,113,763	936	8,185	44,053
Mentally Retarded	79,001,015	852,991	1,455,080	63,686,553	95,300		12,911,091
Physician	32,832,090	3,686,025	250,558	9,861,791	9,282,459	9,376,662	374,757
Dental	12,192,686	1,083,920	53,653	1,602,891	4,880,468	4,413,241	158,513
Prescription Drugs	29,145,995	14,386,456	399,489	8,793,464	1,916,357	3,555,769	94,460
Clinics	7,113,265	2,053,213	52,060	3,230,692	819,173	777,545	180,582
Total	\$483,721,083	\$190,797,790	\$6,003,332	\$162,685,879	\$56,638,426	\$50,861,873	\$16,733,783

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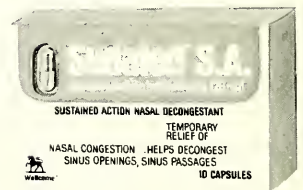
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REDUCTIONS IN THE COST OF ILLNESS (cont.)

Five diseases (poliomyelitis, tuberculosis, mental illness, pertussis, and duodenal ulcer disease) and the pharmaceutical innovations responsible for their declining incidence and/or lessening of severity are surveyed by Dr. Lindsay as examples of the cost-effective contributions that pharmaceuticals make to total health care.

Dr. Lindsay's review and analysis has led to two main conclusions:

1. Net savings due to new prescriptions medications can be substantial. Savings attributed to all five conditions taken together totaled \$47 billion. Savings resulting from the introduction of one drug alone, cimetidine used in the treatment of duodenal ulcer, may provide net savings in excess of \$20 million.
2. Expected savings vary markedly depending on the range of conditions that may be treated, the incidence of those conditions, and whether the new pharmaceutical is therapeutic or confers immunity. This conclusion is supported by the broad range in the savings estimated for the illnesses studied. Two types of vaccines were studied: the Salk and Sabin polio vaccine and the pertussis (whooping cough) vaccine. In order to be maximally effective, vaccination must be administered to everyone. The costs of vaccine implementation are therefore higher than for therapeutic pharmaceuticals, and net savings are correspondingly depressed. Estimated savings for these vaccines were \$2.1 billion and \$289.9 million, respectively.

In addition to cimetidine (net savings of \$20 billion) the impacts of two other therapeutic pharmaceuticals were studied: the effect of streptomycin and PAS on the cost of tuberculosis and the effect of chlorpromazine on the cost of mental illness. Savings attributable to these pharmaceuticals were estimated to be \$15.5 billion in the first case and \$8.4 billion in the second.

Implications

The savings achieved through the use of the pharmaceuticals examined in this study are probably greater than those realized with most drugs. Each agent in the present study has produced dramatic results in the treatment of a highly costly disease. The typical pharmaceutical has a more modest impact on less virulent and less widespread illness. On the other hand, the estimated net savings documented here provide vivid testimony on the potential for continuing net reductions in the cost of illness.

In each of the last five decades pharmaceutical products have been introduced which produce large and documented reductions in the total cost of illness. These results support the conclusion that with responsible regulatory reform, coupled with incentives to enhance research and development efforts within the pharmaceutical industry, large potential gains can continue to be expected from chemical and biomedical research.

PRESIDENT SIGNS PHARMACY CRIME MEASURE INTO LAW

President Reagan signed legislation (S. 422) into law which makes certain types of armed robberies and burglaries of retail pharmacies, warehouses and other registrants to obtain controlled substances a Federal crime. The bill was cleared for the White House on May 17 when the Senate concurred with the House which had passed a compro-

mise measure with several amendments during the previous week.

MAST DRUGS OPENS TENTH STORE

Mast Drugs opened its tenth store May 16, 1984, in Ahoskie with Keith Brewer as pharmacist manager. Mast Drugs was founded by Bill Mast of Henderson in 1968 when he bought out his partner. Another Mast store is scheduled to open in Siler City. Other Mast stores are located in Mebane and Henderson.

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WHOLESALE GRADUATE FROM WHARTON LEADERSHIP PROGRAM

Three representatives of North Carolina Drug Wholesalers have graduated from the Pfipharmecs/Wharton Executive Leadership Program held at the Wharton School of the University of Pennsylvania in May.

W. Keith Elmore, Bellamy Drug Company; C. Rush Hamrick, III, Kendall Drug Company; and Donald V. Peterson, NC Mutual Wholesale Drug Company, were selected for participation in this unique executive leadership program prepared for the drug distribution industry by the Pfipharmec Division of Pfizer Pharmaceuticals and the Wharton School. The curriculum was established by the school's faculty after extensive interviews with drug wholesale executives during the past year.

The intensive seven-day program focused on techniques to increase the effectiveness of the key leaders within their companies. The program studied market segmentation, financial management and computer applications as well as other issues which will shape the future of the industry. The program was made possible by a grant from Pfizer to design an executive development program to meet the specific needs of drug wholesalers. The Na-

tional Association of Drug Wholesalers served as an advisor in the program development.

APhA ESTABLISHES APPLE MEMORIAL MANAGEMENT PROGRAM

The American Pharmaceutical Association (APhA) has established the William S. Apple Memorial Program in Community Pharmacy Management, according to an announcement by Dr. Herbert S. Carlin, Chairman of the APhA Board of Trustees. The new program, which will be endowed by Smith Kline and French Laboratories, is named for the late President of APhA who died on December 17, 1983.

The summer residency program, which will be conducted in the Washington, D.C. area, was established to contribute to the advancement of pharmacy practice by improving the management knowledge and skills of community pharmacy practitioners.

Details of the program and information for applicants are expected to be released in the fall, and the first participants will begin their program in the summer of 1985.



Wyeth Laboratories has contributed \$2,000 to the UNC School of Pharmacy to support drug utilization research in a geriatric population—Wyeth's District manager, Mr. Olin Welsh, and the company's Territorial Representative, Ms. Terri Weigle presented the check to Dean Tom Miya and Mr. Charles Pulliam whose research interests are medication use and adverse reactions in the elderly. Mr. Pulliam will conduct the investigation.



Charlotte Ann Matheny is the recipient of the 1984 Roche Pharmacy Communication Award. Making the presentation at the University of North Carolina at Chapel Hill School of Pharmacy is NCPHA President and Asso-

ciate Professor David Claytor. The award is presented each year to a graduating pharmacy student who has excelled in the area of communication, both in the classroom and practice environment.

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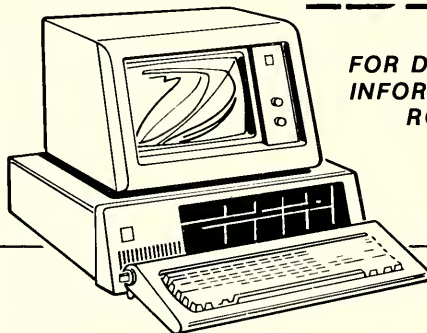
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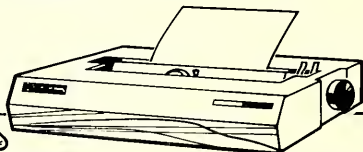


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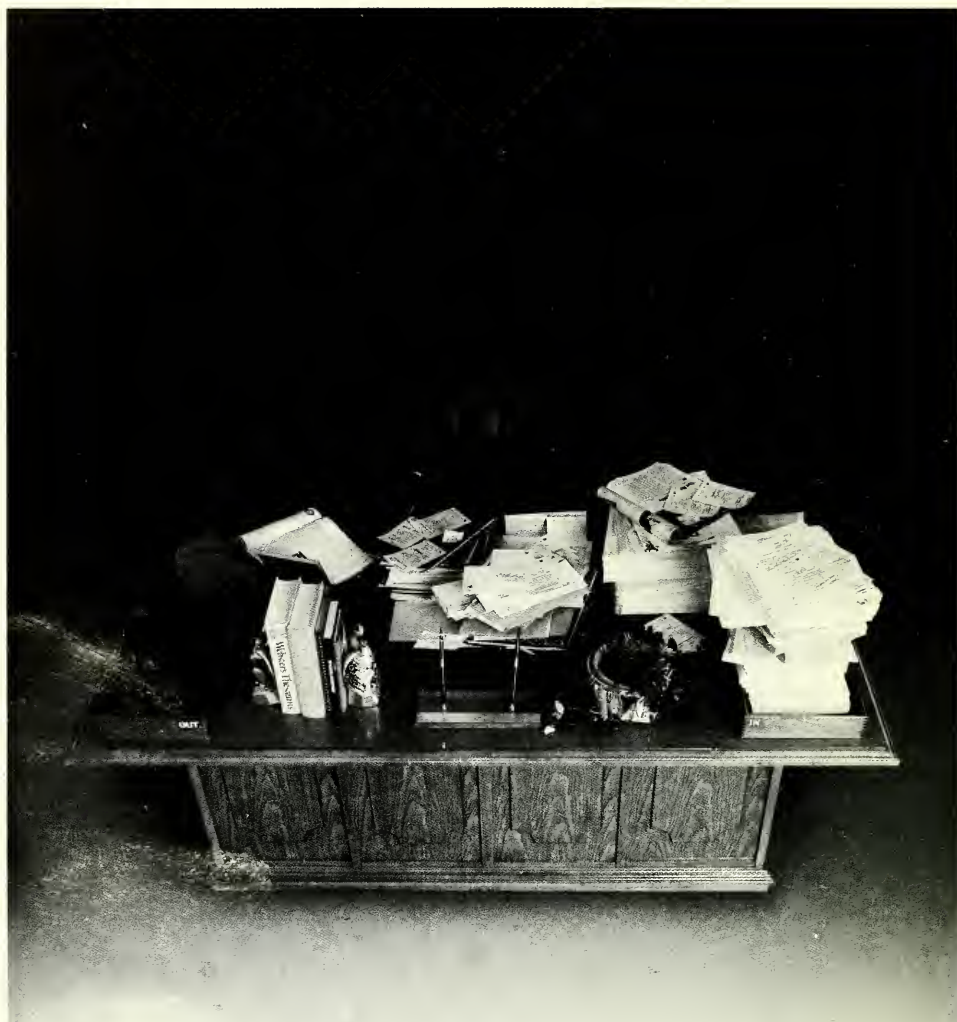
RECIPIENTS OF THE NCPHA

Inducted into the NCPHA Fifty Plus Club, in recognition of having been licensed as pharmacists for fifty years, are Gilbert Hartis, Winston-Salem, E. B. Clapp, Newton, Scott Whiteley, High Point, and Tom Cornwell, Morganton. Also inducted into the club, but unable to attend the Awards Session at the Annual Convention April 8, are Horace M. Metts, Charlotte, Robert R. Wells, Shelby and Leonard H. Crumpler, Raleigh.

PHOTO BY COLORCRAFT

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JUNE 1984 VOLUME 64 NUMBER 6



Hidden Costs

The direct costs of health care actually account for only 40 percent of the total cost of illness. The remaining 60 percent are indirect costs, such as absenteeism and loss of productivity caused by illness. These are as real economically as the health care expenditures usually associated with illness.

Surprising? Yes. But it should come as no surprise that when the patient gets well faster, both the direct and indirect costs can be reduced.



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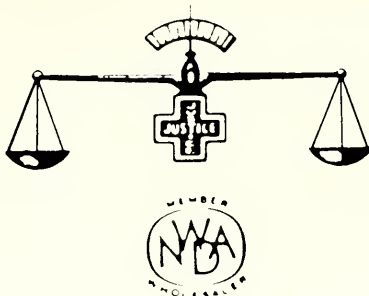
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REPORT OF THE COMMITTEE ON PUBLIC AND PROFESSIONAL RELATIONS

The Committee on Public and Professional Relations met October 9, 1983 and November 20, 1983 at the Institute of Pharmacy, Chapel Hill. Committee members in attendance included Loni Garcia—Chairman, A. C. Dollar, Laura McLeod, Martha Peck, Carl Taylor, Henry Leigh, Lee Worley and Ginger Lockamy, Advisor. Guests included Bruce Cannaday, representing AHEC pharmacists, Cindy Bishop, Co-Chairman, NCSHP Communications/Public Relations Committee, Al Mebane, NCPHA Executive Director and David D. Claytor, NCPHA President.

The primary goal of the year's committee was to plan and implement a "Pharmacy Week" in North Carolina. The purpose of this observation is to increase public awareness of their pharmacist as a valuable drug information resource. The theme of the week is "Ask Your Pharmacist and Get the Answers."

In early July, a promotional packet will be distributed to all members of the North Carolina Pharmaceutical Association and the North Carolina Society of Hospital Pharmacists. The packet will contain an explanatory letter, a "Get the Answers" poster and brochure (from the National Council of Patient Information and Education), an "Ask Your Pharmacist and Get the Answers" button (from Upshaw-Smith), sample patient drug information leaflets (from USP and NCPHA), a list of free patient education/information resources and suggested activities for pharmacists and pharmacies to undertake in the weeks leading up to and during "Pharmacy Week." The Committee plans to publicize the week widely through newspapers, radio and television and state professional journals. A proclamation is being drafted for Governor James B. Hunt's signature declaring October 14-20, 1984 and "North Carolina Pharmacy Week."

This project is felt to be an important one because it encompasses three areas identified by this Committee in past years as important issues;

1. Increased provision of patient education/information by pharmacists.
2. Increased visibility of the pharmacist as a drug information resource.

3. Coordination of public and professional relations efforts with the North Carolina Society of Hospital Pharmacists.

Committee Members

Loni Garcia, Chairman—Chapel Hill
Cindy Bishop—Durham
Carolyn Capowski—Chapel Hill
A.C. Dollar, Jr.—Winston-Salem
Connie Garrison—Lexington
Vincent Kelch—Hubert
Henry Leigh—Cullowhee
Ginger Lockamy—Raleigh
James Matthews—Clinton
Laura McLeod—Winston-Salem
Martha Peck—Raleigh
Carl D. Taylor—Ahoskie
Lee D. Werley, Jr.—Chapel Hill



Morehead City

Mary Good, outgoing Woman's Auxiliary President, installs the President's Pin on incoming President Lib Fearing, Manteo.

Photo by Colorcraft

Report of the Committee on Community Pharmacy

1. The majority of pharmacists contacted throughout the State were in favor of continuing education. We, the Committee, are in favor of continuing education mandatory for license renewal. Also the Committee felt that classroom participation should not be a required stipulation for obtaining the necessary credits of continuing education. These credits could be obtained by correspondence and/or classroom participation depending on individual preference.

2. Pharmacists throughout the State felt that many physicians should be more aware of the current substitution law as it applies both to themselves and pharmacists. Many physicians are of the opinion that the law does not apply to them. Many want to leave oral "Dispense as written" instructions at local pharmacies rather than write on the prescription blank or use the two line signature blank as required by law.

3. The Committee felt that the use of physician assistants and family nurse practitioners is being abused. Some physicians are leaving pre-signed prescription blanks at the disposal of PA's and FNP's when they are out of the office. Also knowledge of the current formulary is lacking as well as the fact that they have no authority to mark refills on prescriptions which they have written. In many instances the intent of the PA and FNP to deliver better health care is being abused for economic gain.

4. The Committee feels that communication between practitioners and educators of pharmacy is lacking. More emphasis should be placed on the realistic aspects of pharmacy rather than the idealistic practice of pharmacy. Also more business oriented courses should be included in the school's curriculum.

5. The Committee feels that the School of Pharmacy's 92-L Academic Internship Program is to be commended. We also feel that more community pharmacists should avail themselves to become preceptors in this program.

6. The public's perception of pharmacists is among the top in honesty and ethics. It should be the responsibility of each and every pharmacist to continue to maintain that image.

7. The Committee feels that charging "professional fees" for blood pressure testing, diabetic screening, etc. in the pharmacy is not in keeping with the historical professional image of pharmacy.

Committee Members

David N. Cox, Chairman—Clemmons
Fred W. Lowry—Statesville
Harry I. Brogden—Lincolnton
J. Frank Burton—Greensboro
Jeff Shatterly—Chapel Hill
Judith W. Wolhar—Charlotte
Palmer W. King, Jr.—Greensboro
Jack L. Alexander, Advisor—Highlands



Tom Burgiss, right, explains to Jeff Shatterly that the plaque he has won as an attendance prize is worn on the left lapel.

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LOCAL NEWS

HARNETT COUNTY

Lt. Col. Rex Parker, Chief Pharmacist for Womack General Hospital at Fort Bragg, presented a most interesting program to the pharmacists of Harnett County at their May meeting. He told of experiences with a MASH Unit during the Bright Star Maneuvers in Egypt, and his more recent three and one-half week stay in Grenada with a Field Hospital. The talk was accompanied by the showing of excellent slides, which not only gave inside and outside views of the temporary hospital units and their pharmacies, but displayed many interesting and beautiful scenes from these countries.

The Harnett County Pharmaceutical Association met at Heath's Steak House in Dunn on Tuesday, May 29th, for a supper meeting. Gary Phillips, president, was there only briefly because of work. Therefore, David McKnight, vice-president and program chairman, presided and introduced the speaker. Others in attendance were Sharon Williams, Caul Jernigan, J. I. Thomas, and Jerry Robinson from Dunn; Bill Lanier, Neill McPhail, and Graham Stewart of Erwin; I. J. Pruett of Angier; Joe Lee, Jr. of Coats; Bill Randall, Reid Saleeby, Stephen Williford, Fleming Lovette, Elaine Sherman, and Edith Ann Caviness of Lillington.

Edith Ann Caviness, Secretary

THE GUILFORD COUNTY SOCIETY OF PHARMACISTS

The regular monthly meeting of the Guilford County Society of Pharmacists was held Sunday evening, April 8, 1984 at Swain's Charcoal Steak House in Greensboro. Following the social hour and dinner, the evening's program got under way with Dr. Russell Kitchens, a Greensboro plastic surgeon, delivering a fascinating presentation via slides and narration about cosmetic and reconstructive surgery.

Following the program, there being no new business to be discussed, the meeting was adjourned.

J. Frank Burton, Secretary, Treasurer

WAKE COUNTY PHARMACEUTICAL ASSOCIATION

1984-85 Officers for the Wake County Pharmaceutical Association were installed Tuesday night, June 5, at the Kanki Restaurant in Raleigh.

President—Pam Joyner

President-Elect—Connie Upshaw

Vice President—Stan Edmundson

Secretary—Joni Berry

Treasurer—John Myhre

Executive Member—Randy Ball

NCPHA President W. A. West told the group of his perceptions of the recent APHA Convention in Montreal and other happenings in pharmacy today. Outgoing President Al Lockamy was presented the "President's Plaque" and was recognized as the Wake County "Pharmacist-of-the-Year by NCPHA Executive Director Al Mebane.

CHARLOTTE WOMAN'S PHARMACEUTICAL AUXILIARY

The Charlotte Woman's Pharmaceutical Auxiliary held their May meeting at the Ramada Inn. Special guest was Gloria Velasques, the auxiliary's scholarship recipient for 1984.

The 1984-1985 officers were installed by Mrs. Georgia Lewis. They are as follows:

President—Mrs. Douglas T. Corwin (Dollie)

1st Vice Pres.—Mrs. Clarence H. Smith (Mary)

2nd Vice Pres.—Mrs. Jesse Oxendine (Jewell)

Recording Secretary—Mrs. Leslie H. Davis (Mary Lou)

Corresponding Secretary—Mrs. C. Thomas Dagenhart, Jr. (Billie)

Treasurer—Mrs. C. Gibbs Henley (Evelyn)

Historian—Mrs. Ralph W. Smith, Jr. (Mercer)

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Advisor—Mrs. W. Ben Hawfield (Nancy)

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BEFORE - BUT WISH
YOU HAD.**



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CORRESPONDENCE COURSE SELF-MEDICATION OF TOPICAL FUNGAL INFECTIONS

By J. Richard Wuest, R.Ph., Pharm.D.

Professor of Clinical Pharmacy, University of Cincinnati, OH
and

Thomas A. Gossel, R.Ph., Ph.D.

Professor of Pharmacology, Ohio Northern University, Ada, OH

Goals

The goals of this lesson are to:

1. discuss the self-treatment of topical fungal infections;
2. review the pharmacology and therapeutics of drugs used to treat topical fungal infections.

Objectives

At the completion of this lesson, the successful participant will be able to:

1. choose the appropriate OTC agent for treating the specific topical fungal infection;
2. properly advise consumers on the selection and use of OTC fungal agents;
3. decide when the consumer should be referred to a specialist.

There are two major types of fungal diseases: the **mycotic**, or deep-seated systemic infections; and the **dermatophytic**, or superficial, topical infections. Only the latter, however, are considered to be self-diagnosable and self-treatable. These are the **tinea** infections and are commonly referred to as **ringworm**. The one prevalent organism that can cause both systemic and superficial disease, **candida**, remains in the "intermediate zone." While a number of experts feel that some forms of candidal infections can be safely self-medicated with topical preparations, others (including FDA) are not convinced that the previously available prescription agents (nystatin, haloprogin, miconazole, clotrimazole) should be switched to OTC status and indicated for candidal infections as was recommended by its advisory panel. More will be said on this later.

Self-Treatable Ringworm Infections

These infections are actually caused by one or more organisms of a group of fungi. Since it is difficult to determine the specific organism causing each infection, the diseases are

grouped together and referred to as **tinea** infections. They are then characterized as to the area of the body affected rather than to the causative organism (e.g., *Tinea corporis*, body; *Tinea pedis*, feet; *Tinea cruris*, groin; *Tinea unguium*, nails; *Tinea capitis*, scalp; and *Tinea barbae*, beard). These organisms only affect dead, keratinized cells of the body (e.g. skin, hair, nails). They do not cause systemic infections.

Common dermatophytic infections that are considered to be self-treatable include athlete's foot, jock itch, and ringworm of the body. Infections of the hair and nails require systemic therapy with the oral agents available only on prescription (e.g., griseofulvin, Nizoral). We will discuss the superficial self-diagnosable, self-treatable infections in this lesson.

Symptoms produced by fungi that cause athlete's foot, jock itch, and ringworm result from their metabolic products. Fungi colonizing in the keratinized structures release enzymes into the skin which hydrolyze fats, carbohydrates, and proteins. These hydrolytic



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(Continued on page 10)

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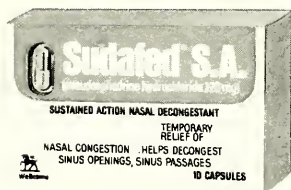
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Fungal Infections

products then diffuse back into the fungi to be used as nutrients for further growth. As these substances are broken down by enzymes, they irritate the skin and produce the typical inflammatory reactions. Additionally, metabolic products of fungi may produce hypersensitivity (allergic) reactions adding to the inflammatory condition and perpetuating itching.

Athlete's Foot (*Tinea pedis*—ringworm of the foot)

This is the most commonly encountered of all tinea infections. Numerous surveys among persons in confined areas, (e.g., students, inmates of institutions, armed forces members), have shown that the incidence of athlete's foot approaches 65 percent. The disease most frequently occurs in hot, moist weather. Adult men are more commonly affected than women; prepubertal children are rarely affected.

The case of athlete's foot is not known. Suspicions that shower room floors are the most common source of infection have not been proven. Several studies have shown that one to three percent of the human population are carriers of fungus pathogens but have no signs of clinical infection.

The term athlete's foot is "generic" in that it is often ascribed to any foot condition involving a rash. When it is a fungal infection, sores or blisters surrounded by narrow zones of peeling, dead, white epidermis, that usually begin between the great and second toe are present. Moisture due to excessive sweating adds to the inflammation, blistering, and spreading. The lesion does not spread symmetrically to form the "ringworm" appearance as do other forms of tinea infection of the body. Untreated, chronic athlete's foot infection can affect the toe webs and soles of the feet. Severe cases can spread to the toenails, invading and ultimately destroying the nail plate.

Itching and burning are prevalent with athlete's foot. The infection can also spread to other parts of the body if proper hygiene is not followed. Secondary infections with bacteria and candida may follow tinea infection of the feet and groin. Both require medical diagnosis, but telltale signs that these secondary invading organisms are present include a

bright red coloration to the tissue inside the "sores" and the presence of pus-like exudate within the blisters. The fluid from the blisters of a tinea infection is generally colorless and orderless. Presence of a pungent odor could mean that the gram-negative bacteria *pseudomonas* is also present.

There are several prophylactic measures which prevent athlete's foot from occurring. These include wearing shower clogs when using public showers, carefully drying the feet after bathing, frequently changing socks and shoes, and dusting shoes with medication between wearings and toes with each sock change. The feet should be kept dry and well ventilated.

In acute flareups, aluminum acetate may be helpful if there is a great deal of blistering, although it is not an antifungal agent. If the blisters are large, the fluid may be removed by draining and absorbing it immediately and carefully with cotton or tissue. Infection spreads with the blister fluid. Care should be taken that the fluid is drained from the margin of the blister where it meets unaffected skin. If the top of the blister is destroyed, healing will take longer and the drainage from the open sore may spread the infection to other parts of the foot or body.

Ringworm of The Body (*Tinea corporis*)

In days gone by, this infection was actually thought to be caused by a "worm" that was located under the skin and expanded peripherally. In actuality, the ringed lesions are caused by an inflammatory response to the advancing fungi as explained earlier. The lesions often vary from simple scaling to degranulation of the skin's surface tissue. They are generally circular. The center may appear scaly and then heal as the wound spreads outward. Again, this gives rise to the phrase "ringworm." However, several lesions may be present which eventually coalesce to form single, large infected areas, each having a healed central core. The lesions itch intensely, especially in warm weather.

Unlike other self-treatable tinea infections, children are much more susceptible to ringworm of the body than adults. Also unlike the others, the infection is carried and spread by animals, most commonly dogs and cats.

Jock Itch (*Tinea cruris*— ringworm of the groin)

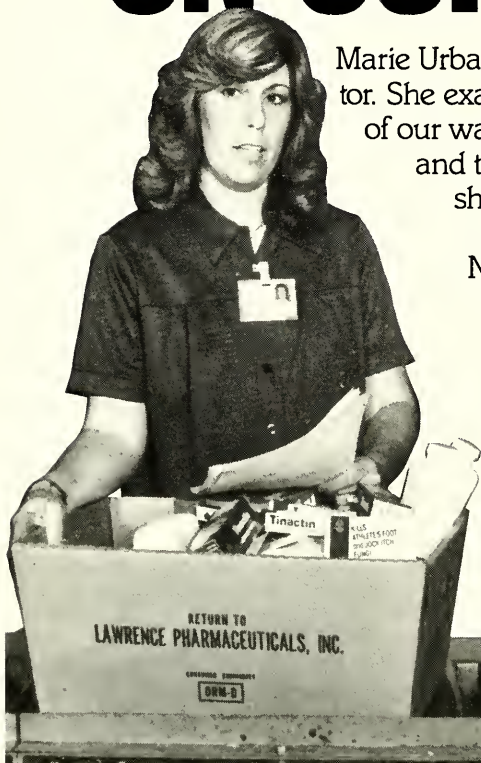
This is a condition in which the fungal microorganisms cause a lesion which extends from the crural fold (the area of the crease between the inner thigh and the pelvis), over the adjacent upper inner thigh, and possibly into the anal area. The lesion will usually appear as a semicircle rather than a ring, but the expanding margin will be slightly raised, rash-like, and scaly. The appearance of blisters is rare. As with athlete's foot, jock itch is uncommon in prepubertal children. The most prevalent group that is affected is males aged eighteen to forty. Also like athlete's foot, the term "jock itch" is generic and may refer to seborrheic dermatitis, psoriasis, or candidiasis, all of which are secondary to *Tinea cruris*.

OTC Agents That Have Proven Effectiveness For Ringworm

A list of these substances is present in Table 1. It includes medications which have been available for years, i.e., the long-chained fatty acids (Desenex®, etc.), tolnaftate (Tinactin®, Aftate®), and iodochlorhydroxyquin (Vioform®). Also listed are two other agents known to be effective against tinea organisms—miconazole (Monistat®) and haloprogin (Halotex®) which have only been available by prescription. The FDA Advisory Panel on OTC Antifungals recommended they be switched to OTC status. FDA is reviewing this recommendation and has stated (as it did with hydrocortisone) that no final ruling will be made until all evidence has been evaluated. In the meantime, manufacturers (again as they did with hydrocortisone) may market these antifungals OTC with the knowledge that the FDA may later disagree with the recommendation. While the volume of sales of these two agents is nowhere near that anticipated for hydrocortisone, nearly one hundred million dollars worth of OTC hydrocortisone-containing products have been sold with FDA still not reporting its final ruling. It is also of some importance that several new antifungals will be coming onto the market (e.g., ciclopirox—Loporox®; econazole—Spectazole®; ticonazole—Trosyd®).

(Continued on page 13)

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Fungal Infections

TABLE 1
Antifungals Considered Safe and Effective by FDA's OTC Advisory Panel

Haloprogin*	-Halotex®
Iodochlorhydroxyquin	-Vioform®
Miconazole*	-Monistat®
Nystatin**	-Mycostatin®, Nilstat®
Tolnaftate	-Aftate®, Tinactin®
Undecylenic acid	-Desenex®, Cruex®, etc.

*Not available OTC at time of Panel's review

**FDA will not allow OTC marketing of nystatin at this time.

The long-chained fatty acids (undecylenic acid, propionic acid, caprylic acid and their salts) had been used to treat fungal infections since 1939 when it was discovered they were components of human sweat and had antifungal activity. The exact mechanism of activity of these substances has not been determined, but it appears as though they interfere with the normal metabolism of susceptible fungi.

The FDA OTC advisory panel that reviewed them found that all three substances were safe for topical use, but it ruled that only **undecylenic acid** and its calcium, copper, and zinc salts have been studied thoroughly enough to prove their effectiveness. The panel therefore recommended that these latter drugs continue to be available as safe and effective antifungal agents. There are some who believe that a 1:4 combination of undecylenic acid with its zinc salt (the USP form) is the most effective form because the zinc salt also provides an astringent activity which may be beneficial.

For **caprylic** and **propionic** acids (actually the sodium and zinc salts), the panel concluded that no well designed, controlled, clinical trials had ever been conducted. At least one such study will be required for each drug before a final ruling is made on its effectiveness.

Tolnaftate is another agent known to be safe and effective. It is thought to act by destroying the filaments that make up the substance of susceptible fungi and, therefore, stunting micelle growth. To review, the mi-

celle of fungi are the complexes of protoplasmic units or tube-like structures (filaments) that constitute the "body" of the fungus.

Iodochlorhydroxyquin is both antifungal and antibacterial. When it enters susceptible organisms, it chemically interferes with metabolic reactions and inhibits their growth. It is effective against tinea and candida organisms and several grampositive bacteria (e.g., staphylococci, enterococci) as well. One item to keep in mind when counseling consumers is that iodochlorhydroxyquin can stain clothing, skin, hair and nails. The stain in the latter three instances will eventually slough off, but it is difficult to remove from clothing.

As the name implies, iodochlorhydroxyquin contains iodine. Persons allergic to iodine or iodine-containing products should select some other preparation. It also can be absorbed sufficiently to affect thyroid function tests; patients undergoing such tests should not use it.

Ticonazole (Trosyd®) is an antifungal by Leeming (Pfizer) that has an action similar to miconazole. It was approved and released as a nonprescription product in early 1983 under the guidelines proposed by the FDA advisory panel.

Effective Agents Recommended For Switch From Prescription-Only To OTC Status

As stated earlier, **haloprogin** and **miconazole** have been evaluated by an OTC advisory panel. For reasons unknown to the authors, the panel did not review the data on **clotrimazole** and did not publish comments on it. With haloprogin and miconazole, however, the panel recommended that FDA change their status to OTC. The panel was convinced by evidence presented to it that both these agents were safe for non-prescription use and, in fact, pointed out that haloprogin has been available OTC in Japan since 1962, and in Canada since 1976. The panel also recommended that these two agents be indicated for self-treatment of external feminine itching associated with vaginal and superficial skin infection caused by candida.

Haloprogin, miconazole, and clotrimazole are definitely effective against tinea and

(Continued on page 14)

Fungal Infections

candida. They appear to act by altering the cell wall's permeability and causing it to lose its ability to act as a selective barrier. The organism then loses its osmotic integrity, its contents escape, and it dies.

The panel also recommended that **nystatin** be changed to OTC status for superficial candidal infections of the external vagina and superficial skin, athlete's foot, jock itch and ringworm of the body. However, FDA disagreed with this recommendation and will **not** allow the transfer of nystatin from prescription-only to OTC status at this time. FDA will also not approve the indication of any OTC product for the treatment of candidal infections.

The panel found that vaginal discharge is the most common pelvic complaint encountered in private medical practice and that it is usually associated with vaginal itching. The two most prevalent causative organisms are *Trichomonas vaginalis* and *Candida albicans* with the latter considered more prevalent (estimated at 1:7 in nonpregnant women and 1:15 during pregnancy). It reported that most women are familiar with this condition (intense itching, erythema, or redness of the vulva, and a white vaginal discharge), especially if they have been previously treated for it.

The panel members felt, however, that the affected woman is bothered mostly by the itching and the raw red eruptions that occur on the vulva. The availability of nystatin (or haloprogin/miconazole) OTC will allow rapid relief of the discomfort until more definitive treatment with oral and intra-vaginal anti-candidal medications can be obtained from a physician. The panel concluded that the use of topical nystatin is rational and well accepted in the treatment of *Candida vulvovaginitis*.

After reviewing the panel's report, FDA disagreed with the recommendation. FDA felt that candidal infections are not self-diagnosable and that self-treatment of vaginal itching could be hazardous without knowing the underlying cause. Itching around the vagina could be a symptom of a more serious condition such as trichomoniasis, gonorrhea, or a systemic disease. Since nystatin is not effective in treating ringworm infection, FDA will

not allow its transfer to OTC status at this time.

FDA requested comments on the issue particularly from gynecologists, and did not approve haloprogin or miconazole for treatment of infections. While FDA did not expressly forbid OTC marketing of these latter two agents for athlete's foot, jock itch, and ringworm, the agency stated that manufacturers who opted to do so did it at their own risk.

Patient Advice

There are some general guidelines that should be followed in treating (and preventing the recurrence of) tinea infections. The involved area should be thoroughly cleansed with soap and water and dried well. Most agents are effective when administered twice a day (morning and night), but a third application during the day might be helpful if it is convenient. Proper care and aeration of the feet is important for that condition as well.

Compliance with this regimen is imperative. If the agent is effective, the condition should clear in approximately two to four weeks. If it does not clear, the patient should contact the physician for advice. The condition could be caused by a non-susceptible organism or bacteria, or be a more serious disease such as seborrheic eczema or psoriasis.

As far as assisting in the selection of a product, there are no clear-cut, definitive, scientifically documented data on the effectiveness of these agents. The practical approach would be to stay with the agent that worked initially. If an agent has not been effective, the person could switch to another product since the action of undecylenic acid differs from tolnaftate, both of these differ from iodochlorhydroxyquin, and all three differ from haloprogin/miconazole. Again, the patient should anticipate two to four weeks to full compliance before the condition clears.

Product Form

Selection of the proper vehicle is an important factor when choosing an antifungal agent because it must gain access to the fungal colony to exert its action. Any topical agent must be capable of moving freely through its vehicle and being available at the point of contact with the skin. However, the site of application must also be kept in

mind. For example, liquids such as tolnaftate solution allow complete movement of the antifungal agent and provide no barrier to its release at the site of infection. It would be an excellent vehicle for ringworm of the body, and small patches of athlete's foot and jock itch that are oozing serum. On the other hand, it might not be the best form for large areas of these latter two conditions because it might run off the area and not remain in contact with the fungi long enough to be effective.

Water immiscible ointments would have a longer "staying" power, but they may not adhere to oozing, moist, or sweaty areas of the skin (prevalent with athlete's foot and jock itch). Ointments may retard the release of active ingredients onto the skin. Water soluble (polyethylene glycol based) vehicles, commonly called creams, reportedly have more advantages over the greasier ointments (petroleum based). They deliver the drug to the site of action more easily and hold it there longer than the aqueous solutions. A slightly viscous, yet water soluble cream is considered to be an excellent vehicle for most conditions where skin rubs against skin, i.e., between the toes and in the groin area. Patients should be aware that they need only apply a thin layer of the medication and rub it in until it dissipates.

The powder forms are recommended for adjunctive use in moist areas where skin rubs against skin because drying will enhance the antifungal activity. Fungi do not survive well in a dry environment. Powders are especially good for prophylactic prevention of recurrent athlete's foot, and should be sprinkled on the toes once or twice a day for this purpose.

The aerosol powders and solutions are designed to deposit the antifungal agent on the skin after the propellants and solvents evaporate. Sweat and moisture present on the skin help dissolve the antifungal agent. Patients preferring these dosage forms should be advised to hold the canister six to ten inches from the affected area and spray the medication evenly, especially between and under the toes. The powder should be sprayed into the socks and shoes as well. The groin area might be too sensitive for the organic solvents in the solution type of product. The precautions necessary for any aerosol dosage form packaged under pressure should be

(Continued on page 17)

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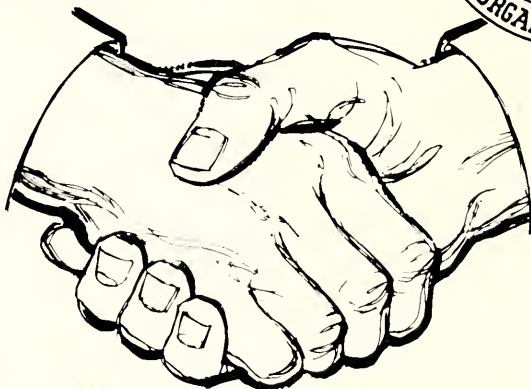
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Fungal Infections

followed. Do not inhale the vapors, keep it away from the eyes, and be cautious near heat or flame.

One final point on patient advice is that the ineffective organism is carried with blister fluid and shedded skin. All clothing, washcloths, towels and bedding should, therefore, be laundered after each use.

Antifungals Of Questionable Efficacy

For many years treatment of fungal infections has included astringents such as aluminum chloride and aluminum acetate, keratolytics such as salicylic acid and sulfur, and antiinfective agents such as boric acid and potassium permanganate. This latter agent was not submitted to the OTC advisory panel and, therefore, was not reviewed for effectiveness.

A concept paramount in the panel's conclusions was that, unlike most other OTC's, symptomatic relief of discomfort is not good enough when using antifungal agents. While many consumers will be satisfied when the itching and redness cease, a truly effective antifungal agent must actually kill the organisms and remove the underlying cause. When evaluating a variety of traditional "antifungals" (Table 2), the OC panel found that these substances lacked definitive proof of effectiveness. In most instances, the panel requested at least one, well designed, controlled, clinical trial to establish the effectiveness of these substances before they be classified in the proven safe and effective category.

TABLE 2
Antifungals Requiring More Evidence of Proof of Effectiveness

Aluminum salts	Phenyl salicylate
Basic fuchsin	Povidone-iodine
Benzethonium chloride	Propionic acid
Benzoic acid	Salicylic acid
Boric acid	Sodium borate
Chloroxylonol	Sodium caprylate
Chlorothymol	Sulfur
Cresols	Triacetin
Dichlorophen	Zinc caprylate
Oxyquinolines	Zinc propionate
Parabens	

The aluminum salts have been shown to be effective in inhibiting growth of both bacteria and fungi, but no such studies have been conducted specifically for athlete's foot, jock itch, or ringworm. Castellani's paint (carbolfuchsin solution) has been used since the early 1900's to treat bacterial and fungal infections. It contains basic fuchsin, acetone, boric acid, phenol and resorcinol and is not an OTC item. No studies have been conducted on basic fuchsin alone. Therefore, it too was placed in the "needs more study" category. Benzalkonium chloride is a well established antibacterial agent, but there is a lack of evidence to substantiate its antifungal activity. Benzoic acid is an excellent and widely used preservative, but it has not been adequately studied as therapeutic agent to the satisfaction of the advisory panel.

Boric acid and its salts, is a concentration greater than five percent, have been ruled to be unsafe for any use due to potential poisonous effects. The panel felt that lower concentrations are not a toxicity hazard when used on intact skin. However, it recommended that boric acid not be used on inflamed or broken skin. Even though it is a common ingredient in OTC antifungal agents, it was found to lack sufficient evidence of effectiveness.

There is no doubt that salicylic acid possesses keratolytic activity, i.e., it destroys the bonds that hold keratin cells together. It has been used through the years (e.g., with benzoic acid as Whitfield's ointment) as a mild keratolytic both for its antiseptic and antiparasitic effects, and, to "enhance the penetration of other active ingredients" into the skin. Sulfur has been used for the same reason. In neither instance, however, could the panel find documentation of their effectiveness in treating fungal infections.

This was the case for all of the other agents listed in Table 2, but a special point should be made about triacetin. Its mechanism of action is reportedly due to its hydrolysis to the active principle — acetic acid. Unlike most other antifungals, it works better in the presence of body serum (i.e., the blister fluid). Its manufacturer has conducted experiments to prove effectiveness, but the FDA panel found that these experiments were not adequate. The panel concluded that, when it is

(Continued on page 18)

Fungal Infections

proven to be effective, triacetin should only be indicated for "soggy" athlete's foot, and not for the dry forms of ringworm disease.

Agents Ruled To Be Unsafe And/OR Ineffective

These agents are listed in Table 3. If FDA accepts this recommendation of the OTC advisory panel, these agents will be banned from future non-prescription sale.

First among them is carbol-fuchsin solution. The panel concluded that the percentages of phenol (4.5%) and resorcinol (10%) exceed the maximal safe concentrations for self-medication. It recognized that the solution has been used for over half a century with no documented toxicity being reported, but it felt that such use is appropriate for physician supervision, not OTC sale. Phenol and resorcinol alone were placed in this category as well.

TABLE 3

Agents Proposed to be Banned From OTC Sale as Antifungals

Camphor
Candididin
Coal tar
Menthol
Phenol
Phenolates
Resorcinol
Tannic acid
Thymol
Tolindate

The panel ruled that camphor and menthol were slightly antiseptic but weak antifungals. While they may produce a feeling of coolness and provide a mild anesthetic effect to reduce itching, they not not kill fungi. The panel did, however, suggest that in concentrations of less than two percent, either or both of these agents may be present as inactive ingredients for product identification, (i.e., the medicinal smell).

Thymol lacked evidence of safety and effectiveness. It has also been used for years and was originally touted as being the replacement for phenol because it smelled better and was less toxic to tissue. Its action, however, is reduced in the presence of organic matter and protein. While it may be a good

antiseptic for inanimate objects, the panel did not feel thymol could be proven safe and effective for fungal infections on human skin.

Coal tar derivatives were ruled to be unsafe because they are known carcinogenic agents, and can cause phototoxicity reactions, acne-like skin lesions, and generalized pustular psoriasis (authors' note: even though coal tar derivatives are useful in treating some patients with psoriasis).

Tannic acid is a proven astringent. It has little action on intact skin, but on abraded skin, it precipitates protein to form a protective film. It has been used as an astringent and styptic for years. After reviewing all the data, the panel concluded that tannic acid in antifungal medication is of historical interest only. It does not have proven beneficial effects.

Candididin has been rejected for OTC use by the FDA. Even though it has been shown to be effective for intravaginal use in candidal infections (on a prescription-only basis), it has never been studied for extravaginal use. There was no evidence of its effectiveness or safety for self-treatment (in the panel's opinion) of superficial candidal infections. Tolindate, a compound similar to tolinaftate, was turned down for OTC use by the panel because it is currently in the IND (Investiga-

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tional New Drug) stage and all data are classified.

Combination Antifungals

The panel recommended that the combination antifungals listed in Table 4 be permitted for OTC sale. FDA, however, disagreed with many of them. While it will permit the marketing of up to three Category I antifungals mixed together as long as each is already available OTC, an additional provision is that each ingredient must broaden the spectrum of activity of the combination. FDA will not allow marketing of any combination containing a previously prescription-only ingredient at this time. The agency will allow continued OTC sale of antifungal/antiperspirant combinations that are already on the market, but stated that the panel's theory of these combinations' benefits was not supported by the data in the report. FDA also pointed out that the panel's placing of antifungal/antiperspirant combinations in Category I for athlete's foot conflicts with another panel (OTC Antiperspirant Drugs) that relegated antiperspirants to the "needs more study" category when used on the foot. FDA requested comments so that this matter can be resolved.

TABLE 4

Antifungal Combinations Considered Safe and Effective by FDA's OTC Advisory Panel on Antifungals

Up to three antifungal agents*
 Antifungals with antiperspirants*
 Antifungals with keratolytics*
 Antifungals with hydrocortisone**

*FDA will not allow these combinations if they include an antifungal not available OTC as of March, 1982.

**FDA will not allow this combination on the OTC market at this time.

One final point concerns the antifungal panel's recommendation that antifungal/hydrocortisone combinations be available for OTC use. In this instance, FDA again disagreed, for two reasons. First, the only two such products available are iodochlorhydroxyquin with hydrocortisone (Vioform HC[®], Domeform HC[®], Racet[®], etc.), and calcium undecylenate with hydrocortisone (Caldecort[®]). They are under the DESI re-

view meaning they have not yet been proven to be safe and effective.

Second, another OTC panel that reviewed hydrocortisone (and recommended its switch to OTC status) specifically concluded that it should be a single entity product only and not be available in any combination.

As stated earlier, FDA has requested comments on these matters and will make its final decision after reviewing them. In the meantime, from the pragmatic side, the FDA has authority over manufacturers, not practitioners, or private citizens. If physicians choose to prescribe and consumers wish to mix antifungals and hydrocortisone together, they are free to do so.

In conclusion, there are safe and effective OTC antifungals: undecylenic acid and its salts, iodochlorhydroxyquin and tolnaftate. When haloprogin and miconazole are shifted to OTC status, they will add to the self-medication armamentarium of agents effective against these highly infective and contagious microorganisms.



Executive Director of the Board of Pharmacy, David Work, with his youngest inspector, daughter Susan, at the 1984 Annual Convention of the NCPPh.




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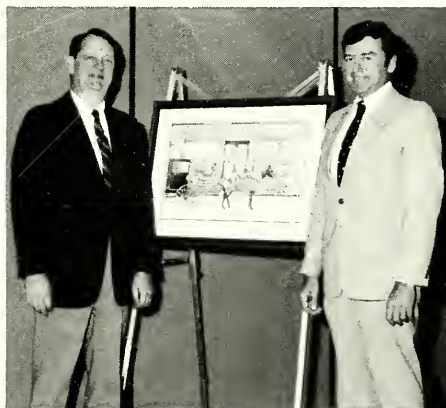
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George Ross, Government Affairs Manager, Merrell Dow Pharmaceuticals, on the right, presents a numbered limited edition lithograph by David Armstrong named *The Apothecary Shop* to the NCPHA. Accepting the litho is Al Mebane, NCPHA Executive Director. PHOTO BY COLORCRAFT

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Dean Miya, distinguished platform participants, families of graduates, especially mothers of graduates and graduates.

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As this year's president I have the opportunity to invite each of you to become a part of this professional organization which has as its purpose a better life for all of North Carolina's citizens.

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our executive director applications which will make it possible for you to become a member of the association. I urge you to join. You will benefit, as will the association. Collectively our profession will be strengthened by your membership and much more can be accomplished through the strength of many as opposed to what only one may do.

No matter what your endeavor, independent, chain, hospital, teaching or whatever facet of service, I look forward to working with you in an association which will be attentive to your professional needs.

Again, congratulations and best wishes from the association for a long and successful professional life.

As alluded to by Dean Miya, my wife Maxine and I are on our way home from the APHA Convention in Montreal. Yesterday we spent in Lancaster, Pa. in that beautiful farm land of the Amish. The Amish have a saying which I leave with you graduates, "May all your bridges be covered ones."

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REPORT OF THE ELECTIONS COMMITTEE

The NCPHA Elections Committee met June 13, 1984 to open and tally the ballots in the mail election and the results are as follows:

For NCPHA First Vice President, (President Elect), M. Keith Fearing, Manteo.

For NCPHA Second Vice President, W. Keith Elmore, Wilmington.

For NCPHA Third Vice President, William T. Sawyer, Charlotte.

For NCPHA Executive Committee (One Year Term), J. Frank Burton, Greensboro, Joseph L. Johnson, Jr., Greensboro, and George M. Willets, III, Wilmington.

For Director of the Pharmacy Foundation of North Carolina, Thomas R. Burgiss, Sparta, Laura G. Burnham, Winston-Salem, John C. Hood, Jr., Kinston, and L. Milton Whaley, Durham.

NCPHA Officers will be installed in office at the Annual Convention to be held in Raleigh, April 10, 11 & 12, 1985.

Respectfully submitted, The Elections Committee, Robert L. Smith, David D. Claytor, Evelyn P. Lloyd, Patricia C. Giddings, Claude U. Paoloni, and A. H. Mebane, III, Executive Director.

WHERE SHOULD YOU STORE PERSONAL RECORDS?

The place you store personal records can be extremely important, especially when the time comes when they are needed. An article in the February 1984 issue of *Small Business Report* (9:2, p. 76) makes some recommendations.

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In a strong box at home, keep bank and insurance records, insurance policies, Social Security papers, tax and medical records, and receipts of deductibles.

Reprinted from Pharmacy Practice



SEEN AT THE NCPHA CONVENTION

PharmPAC program participants included Henry Smith, Secretary Treasurer of PharmPAC, Sue Hudson, Board of Directors, Senator Bob Jordan, and Chairman of the Board of Directors, John Bullock. PHOTO BY COLORCRAFT

Correspondence Course Quiz

Self-Medication of Topical Fungal Infections

1. The medical term for jock itch is:
 - a. Tinea capitis
 - b. Tinea corporis
 - c. Tinea cruris
 - d. Tinea pedis
2. All of the following are true statements **EXCEPT**:
 - a. Tinea organisms only invade dead tissue.
 - b. It is relatively easy to isolate and identify the specific organisms causing each type of ringworm infection.
 - c. Tinea organisms hydrolyze materials in the cells they invade to produce materials for further growth.
 - d. Inflammation associated with ringworm is caused by metabolic products of the infective fungi.
3. Prepubertal children are most susceptible to which of the following ringworm infections:
 - a. body
 - b. foot
 - c. groin
4. All of the following are safe and effective for treating ringworm infections **EXCEPT**:
 - a. Clotrimazole
 - b. Haloprogin
 - c. Miconazole
 - d. Nystatin
5. The antifungal that acts by destroying the filaments that make up the substance of susceptible fungi, thereby stunting their micelle growth is:
 - a. Desenex®
 - b. Mycostatin®
 - c. Tinactin®
 - d. Vioform®
6. To be truly effective, an antifungal agent must:
 - a. alleviate symptoms of the infection
 - b. cause infected tissue to shed
 - c. exert an astringent activity
 - d. kill the infective organisms
7. All of the following statements correctly refer to self-diagnosable dermatophytic infections **EXCEPT**:
 - a. They are caused by candida organisms.
 - b. They are self-treatable.
 - c. They are superficial infections.
 - d. They are called ringworm infections.
8. Which of the following substances has demonstrated the greatest proof of effectiveness in treating ringworm infections:
 - a. caprylic acid
 - b. propionic acid
 - c. salicylic acid
 - d. undecylenic acid
9. The appearance of which of the following is a sign that a secondary infective organism has invaded an athlete's foot lesion?
 - a. a symmetrical, spreading inflammatory condition
 - b. peeling, white epidermal tissue
 - c. pungent pus-like exudate from the blisters
 - d. sores on the webs of the toes
10. The crural fold is the skin lying between:
 - a. the great and second toe
 - b. the inner arm and rib cage
 - c. the inner thigh and pelvis
 - d. the neck and sternum
11. All of the following advisory statements are appropriate for consumers self-medicating an athlete's foot condition with OTC antifungals **EXCEPT**:
 - a. Compliance is imperative—the product should be applied 2 to 3 times a day for several weeks.
 - b. Tolnaftate cream has been demonstrated to be consistently more effective than the other OTC agents.
 - c. Keep the feet well aerated and as dry as possible.
 - d. If the condition does not clear up after a month of proper self-treatment, it may be something other than athlete's foot.
12. The product that stains clothing, contains iodine and has both antifungal and antibacterial activity is:
 - a. Desenex®
 - b. Mycostatin®
 - c. Tinactin®
 - d. Vioform®
13. The substance that the OTC advisory panel ruled to be ineffective for treatment

of fungal infections, but allowable as an adjunct to provide a characteristic "smell" in OTC antifungals is:

- a. coal tar
 - b. menthol
 - c. phenol
 - d. thymol
14. Which of the following is **NOT** considered to be a self-treatable infection:
- a. Tinea capitis
 - b. Tinea corporis
 - c. Tinea cruris
 - d. Tinea pedis
15. Which of the following is a true statement about athlete's foot-induced blisters:
- a. They must not be drained.
 - b. The infection spreads with the blister fluid.
 - c. They are invariably a sign of secondary infection.
 - d. If they are drained, they should be broken at the highest point of the blister.

This Continuing Education article is approved for one (1) hour C. E. credit. A score of 90% is required for C. E. credit. The test may be repeated only once. Please mail in your

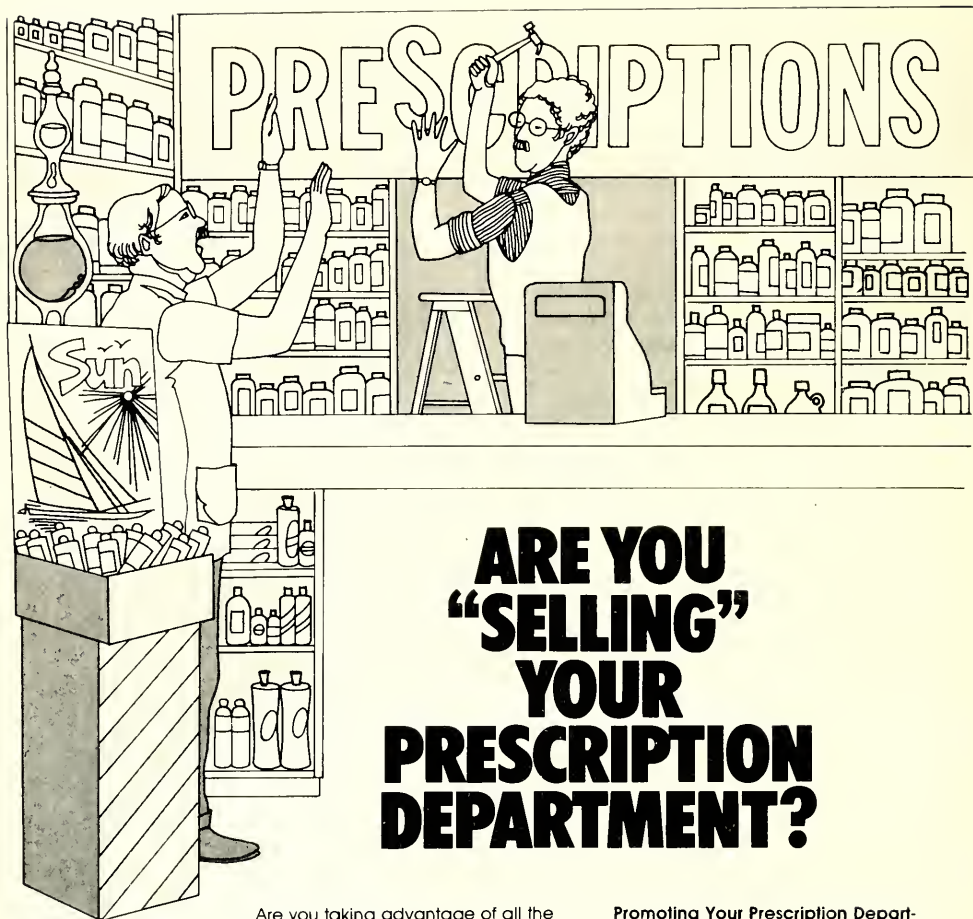
answers to the NCPHA, P. O. Box 151, Chapel Hill, NC 27514. Records will be kept for you at the NCPHA office. There is no charge for NCPHA members.

NOTICE OF PUBLIC HEARING

A public hearing has been scheduled by the NC Board of Pharmacy for considering a proposed regulation to require that pharmacists obtain 10 hours of continuing education each year as a condition of license renewal. At this time the Board will also consider a proposed regulation on security of drugs in the pharmacy. This hearing is scheduled for 2:00 p.m. on Tuesday, September 18, 1984 at the Institute of Pharmacy, corner of Rosemary and Church Streets in Chapel Hill. Copies of the proposals can be obtained by sending a self-addressed, stamped envelope to the Board's office at P.O. Box H, Carrboro, 27510. Any interested person may speak at the hearing but if you are unable to attend, written comments should be submitted to the Board office prior to the date of the hearing.



Past Presidents of the Woman's Auxiliary at the 1984 Annual Convention of the North Carolina Pharmaceutical Association and Affiliated Auxiliaries: Left to right, Vivia Creech, Mary Dollar, Jerry White, Virginia Forrest, Sarah Ann Sasser, Ruby Creech, Ida Wells, Lib Markham, Mary Good and Doris Claytor



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BURROUGHS WELLCOME PHARMACY EDUCATION PROGRAM

Burroughs Wellcome Co. is pleased to announce the continuation of the Burroughs Wellcome Co. Pharmacy Education Program through 1984. This year, we will distribute \$156,000 toward the program, bringing the total amount of awards over the past eleven years to better than \$1,000,000.

The objective of the Burroughs Wellcome Co. Pharmacy Education Program is to bring all segments of pharmacy (retail—chain and independent, hospital academic and industry) together for the basic support of the future of pharmacy, i.e., to aid deserving students in completing their education.

Each year pharmacists from every state plus the District of Columbia and Puerto Rico are invited to participate in the Burroughs Wellcome Co. Pharmacy Education Program. Pharmacists who participate in the program have the opportunity to compete for educational grants which are presented in their names to the pharmacy school of their choice. Upon receipt, the pharmacy school involved creates a permanent revolving loan fund in the individual pharmacist's name. These loan funds are used to aid deserving students in completing their educations.

When the program started in 1974, 52 students received grants of \$250. In the following two years, 104 pharmacy students benefited by receiving \$500 grants. In subsequent years, the program grew to providing \$750 grants to 156 pharmacy students.

In 1982, the Burroughs Wellcome Co. Pharmacy Education Program expanded further. Under this present format, each of the 156 winning pharmacists are given the opportunity to donate, in their name, a \$500 educational grant to the pharmacy school of their choice; and, an *additional* \$500 grant, issued in their name, is presented to the educational foundation of one of the following national pharmacy associations: American College of Apothecaries (ACA), American Pharmaceutical Association (APhA), American Society of Hospital Pharmacists (ASHP), National Association of Chain Drug Stores (NACDS), National Association of Retail Druggists (NARD), or the American Society of Consultant Pharmacists (ASCP). Again,

the choice of national pharmacy association is up to the winners.

Pharmacists become eligible for the drawing (scheduled for August 30, 1984) by filling out and mailing an entry form to B. W. Co.* by the August 15 deadline. To be valid, the entry form must include both the pharmacy school and the national pharmacy association of their choice. Each of the 156 pharmacists will receive a suitably inscribed plaque in recognition of their being a winner. And *everyone who enters will receive a free gift—a replica of a 17th century pill tile.*

CALL FOR ABSTRACTS NATIONAL CONFERENCE ON HIGH BLOOD PRESSURE CONTROL

The National Conference on High Blood Pressure Control will provide a forum for the exchange of information between providers, administrators, and researchers on issues relevant to the evaluation and management of high blood pressure and other risk factors for cardiovascular disease.

The Conference will be seeking papers that address new approaches to today's challenges in the detection, treatment, and long-term management of the hypertensive patient. Major categories will include:

- Worksite Based Programs
- State and Community Programs
- Nonpharmacological Approaches
- Population Surveys
- Program Administration
- Clinical Trial Results
- Drug Treatment
- High Blood Pressure in Special Populations
- Global Issues
- New Procedures for Measurement
- Communications and Education for High Blood Pressure

For further information about the Conference or to be placed on the mailing list to receive the guidelines for submitting abstracts call or write to:

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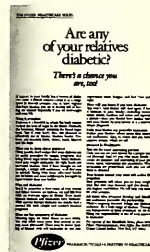
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USP XXI—XVI TO BE PUBLISHED IN JULY 1984

The Twenty-First Revision of the United States Pharmacopeia and the Sixteenth Edition of the National Formulary will be published about the first of July 1984 by the United States Pharmacopeial Convention, Inc. (USPC). Both compendia will become official January 1, 1985. For the second time, the two official compendia are combined into a single volume.

The new revision, USP XXI—NF XVI, will include a total of 2966 monographs, 457 more than were published in the 1980 revision.

Two Official Compendia in a Single Volume

Although published in a single volume, USP and NF continue as two distinct official compendia. The United States Pharmacopeia, Twenty-first Revision (USP XXI) will include 2716 monographs on drug substances and dosage forms; The National Formulary, Sixteenth Edition (NF XVI) will include 250 monographs on inactive agents known as pharmaceutical ingredients. Where an article is used as both a therapeutic agent and a

pharmaceutical ingredient, it is included in USP XXI, with a cross-reference from NF XVI to that USP monograph. A combined index to USP XXI and NF XVI will facilitate reference to the contents of the respective compendia.

Subscription Plan for USP-NF

A new subscription plan for USP-NF has been introduced by USP to keep health professionals as up-to-date as possible on drug standards at a reasonable cost and in a more convenient way. Subscribers will pay an initial subscription fee to begin their subscriptions, and will receive the current main volume and any supplements issued during their twelve-month subscription. To keep up-to-date, the subscriber renews the subscription each year. In future years, new main volumes will be included in the continuing subscription price; there will be no additional charge for new main volumes for continuing subscribers.

Subscriptions for *USP XXI—NF XVI* may be entered for \$155.00, through the North Carolina Pharmaceutical Association. For more information, call or write the NCPHA Office, P. O. Box 151, Chapel Hill, NC 27514. (919) 967-2237.



NCPHA President W. Artemus West and family: Left to right, sister Matilda, President West, Mrs. West (Maxine) daughter Delwood and son Thomas Latham.

Photo by Colorcraft



Lisa Grimes and Ray Davis presenting their survey on "Prescription Drug Shortages and their Effects," at the Annual Convention in Chapel Hill. Photo by Colorcraft.

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DEATHS**R. HOMER K. ANDREWS**

R. Homer Andrews, Burlington, died Thursday, June 7, 1984, at his home, after a lengthy illness. He was 91 years old. He was a Life Member of the North Carolina Pharmaceutical Association, having first joined in 1914. Born in Chapel Hill, Andrews graduated from the University of North Carolina in 1914 with a Ph.G. degree and he received his Doctor of Pharmacy degree in 1915. He was active in Burlington civic affairs, serving as postmaster from 1935 to 1964, and on the Alamance County Board of Commissioners and the Burlington Board of Alderman. He was named Alamance County's Man of the Year by the Kiwanis Club in 1955 and received the A. H. Robins' Bowl of Hygeia Award in 1979.

BIRTHS

Tracy and *Steve Furr*, Greenville, announce the birth of Stephen Benjamin Furr on June 18, 1984. Benjamin weighed 8 pounds 15½ ounces and was 22 inches long. All are doing well. Steve is employed at Pitt County Memorial Hospital and Tracy was formerly employed as a secretary in the Chapel Hill office of the NCPhA.

MARRIAGES

Robin Kim Smith of Oak City and *Joseph Owen McDowell* of Scotland Neck were married Sunday May 27, 1984 in Williams Chapel United Methodist Church.

The bride, a graduate of the University of North Carolina at Chapel Hill, works for Nash & Co. in Tarboro.

The groom is a graduate of UNC School of Pharmacy and is a pharmacist at McDowell's Pharmacy in Scotland Neck.

Nancy Lynn Byrd of Smithfield and *Robert C. Pearson* of Greenville were married Saturday May 12, 1984 in Centenary United Methodist Church.

A graduate of the University of North Carolina School of Pharmacy, the bride is a pharmacist at Northern Hospital of Surry County in Mount Airy.

The groom graduated from N.C. State University and the UNC School of Pharmacy at Chapel Hill. He is a research pharmacist for Burroughs Wellcome Co. They will live in Greenville.

PHARMACEUTICAL RELIEF AND CONSULTATION: By the day(s), week(s) or month(s). For sale: *Esper 732 Electronic Cash Register*. Class A Torsion Balance recently rebuilt by J.A. King Co. Greensboro, (no weights). AES, Medical Blood pressure computer, not a coin-op., patient may use unassisted. Contact Leonard W. Matthews, III (919)967-0333 or write 1608 Smith Level Rd., Chapel Hill, NC 27514.

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SALESMEN AND SALESWOMEN WANTED: For pharmacy computer systems marketing. Contact: James Hall, computerscript, Systems Research and Development, P.O. Box 12221, Research Triangle Park, NC 27709. (919) 544-1730.

PHARMACY FOR SALE: Volume \$300,000. Location: Shopping Center in the middle of the state. If interested write BG, NCPhA, P.O. Box 151, Chapel Hill, NC 27514.

PHARMACIST POSITION AVAILABLE: In Eastern NC. Independent pharmacy. No nights or Sundays. Contact Wayne Avery —(919) 243-3176 or 237-7342.

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PHARMACIST NEEDED: Eastern NC. No nights, Suns. Negotiable salary. Option to purchase. Contact: NCPhA, Box AR, P.O. Box 1511, Chapel Hill, NC 27514.

FULL TIME PHARMACY POSITION AVAILABLE: With Treasury Drug Company in Roanoke Rapids and Raleigh area. Please contact Tom Dyroff, 1-800-245-4733 or 215-547-0300.

UNIT-DOSE EQUIPMENT FOR SALE: Drustar 7-day Unit-Dose delivery system; complete set-up for up to 120 beds; used less than 2½ years and is in excellent condition; for more information, call (704) 233-4075 between 9:00 A.M. and 7:00 P.M.

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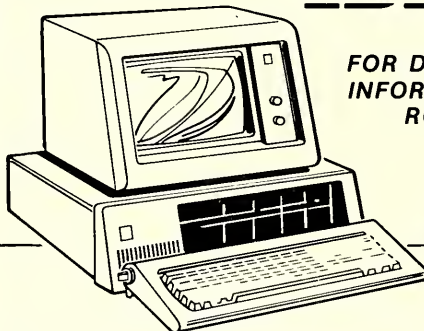
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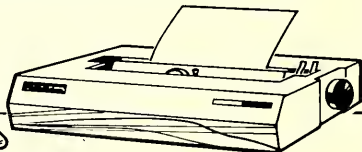


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THE CAROLINA JOURNAL of PHARMACY

OCT 5 1984

JULY 1984 VOLUME 64 NUMBER 7



Melanie Spencer, recipient of the Ralph P. Rogers Sr. Pharmacy Administration Award, and Ralph P. Rogers, Jr. Article on page 19

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JULY 1984

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NUMBER 7

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1983-84 REPORT OF THE SCHOOL OF PHARMACY AND THE PHARMACY FOUNDATION OF NORTH CAROLINA

Presented at the 104th Annual Convention

April 8, 9 & 10, 1984, Chapel Hill

By Tom S. Miya, Dean

The fiscal year covered by this report indicates a continuing improvement of the School's position in terms of its stature and its operations. I would be the first to admit that there are improvements which need to be made as we *collectively* strive for excellence. Collectively defines not only our School and University efforts, but the efforts of you, the practitioners of the profession.

It is not possible to cover all aspects of our activities in any detail. More detailed information or explanation of any aspects of your School's operation is available through my office.

The following synopsis indicates the involvement of the School over a wide range of activities—from fund-raising to public service, from attention to programs to the quality of our students. What surfaces clearly in these endeavors is an attempt to optimize our available resources from all sectors from which we receive support.

Degrees Awarded

The first class of Doctor of Pharmacy (Pharm.D.) students received their diplomas in May. It is a program which will provide the opportunity for significant additional pharmaceutical services by UNC-CH trained graduates. These five graduates plus the baccalaureate degree students who completed their degree requirements in August, December, and May make a total of 157 professional degrees. Add to these graduates the thirteen M.S. and five Ph.D. degrees conferred, for a total of 175 degrees granted through the School of Pharmacy this year.

For information, Table 1 shows a summary of applications and admissions for our professional degree programs.

Interdisciplinary Programs

The close working relationship between the schools of the Division of Health Affairs can be accented by an example. A joint Ph.D. degree program developed between the School's Division of Pharmacy Administration and

the Department of Health Policy Administration, School of Public Health will afford the opportunity for pharmacy students to pursue degrees in an increasingly important area of pharmacy.

Publications

Scholarly activities continue at an excellent rate. One hundred five research and scholarly manuscripts, eight textbook chapters, six book reviews, forty-one abstracts, one self-instructional packet, and one computer program were generated.

Funding

With reduced budget from the State and the disappearance of federal capitation funding, it has been increasingly difficult to maintain excellence in some programs and to attempt to attain it in others. The importance of gifts from private sectors is and will continue increasingly to be of significance. Gifts from individual and corporate/group sources have increased from \$25,000 in FY 1980-81 to \$31,000 in FY 1981-82 to this past year's \$64,000. Extramural funding from federal and corporate sources generated by the faculty increased over the previous year by \$115,000. I am also pleased to announce the Mary L. Hollingsworth bequest to the School for approximately \$250,000 endowment for undergraduate scholarship and an additional approximately \$250,000 endowment to the Foundation. A gift of a computer system through Dr. T. C. Smith Company is also acknowledged.

Task Force on Professionalism

A Professionalism Task Force of faculty and practitioners undertook a year-long task of evaluating a broad spectrum of activities to improve professionalism. Its recommendations such as the Pharmacy Faculty Information Seminar and the Honors Program have already been implemented. A Practitioner-

(Continued on page 7)



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SCHOOL OF PHARMACY

Educator Forum has been implemented, and two meetings have already been held. One student will receive a B.S. degree with highest honors in May.

The Pharm.D. Program remains small until adequate budget is obtained to expand it to its approved level of 15 students per class. Applications for the program are of high quality and the selection of students in the program remains very competitive. The applications and admissions for the Pharm.D. Program for the past two years are summarized in Table I.

Pharmacy Foundation of North Carolina, Inc.

Newly elected members of the Pharmacy Foundation Board of Directors are as follows: W. J. Smith was elected to fill a vacancy and became a Board member immediately. His term ends 1987. H. Q. Ferguson and J. D. Whitehead became BOD-elect with terms ending 1988. All three were elected by the

Board of Directors members. Four additional BOD-elect members elected by the North Carolina Pharmaceutical Association membership with terms ending 1988 are Paul Bissette, J. L. Creech, H. W. Lynch, and C. M. Whitehead.

For the FY July 1, 1982 to June 30, 1983 the Common Fund, our fund managers, performed in an excellent manner. The equity fund increased from \$309,946 to \$514,349. The Bond Fund appreciated from \$139,314 to \$164,000. No part of the Hollingsworth bequest mentioned earlier had been received by the end of the fiscal year.

Contributions to the Foundation for the past three years for 1980-81, 1981-82, and 1982-83 are: \$24,739, \$30,734, and \$63,975. The increases are dramatic, but are due to a few large gifts. Of the 351 contributors, 284 were UNC-CH alumni—total alumni number about 3,500. General Alumni Association giving is at the 18% level, and the School of Nursing is at 22%.

We are proud to announce that we now have seven Chancellor's Club members, two of whom are in the next to the highest

Table I. Summary of Applications and Admissions for Fall, 1982 and Fall, 1983.

	Applicants						Admissions					
	1982			1983			1982			1983		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
<i>B. S. Pharmacy</i>												
<i>UNC-CH</i>												
GC	34	81	115	30	68	98	26	66	92	27	56	83
IU	13	16	29	20	21	41	9	13	22	14	15	29
Read	10	8	18	7	4	11	9	6	15	6	3	9
Totals	57	105	162	57	93	150	44	85	129	47	74	121
<i>Outside</i>												
<i>Transfers</i>												
In-State	30	38	68	29	43	72	15	20	35	15	20	35
Out-of-State	15	12	27	11	10	21	4	2	6	0	4	4
Totals	45	50	95	40	53	93	19	22	41	15	24	39
Grand Totals	102	155	257	97	146	243	63	107	170	62	98	160
<i>Pharm. D.</i>												
All Applicants	8	10	18	11	10	21	2	4	6	4	2	6

The Pharm.D. Program remains small until adequate budget is obtained to expand it to its approved level of 15 students per class. Applications for the program are of high quality and the selection of students in the program remains very competitive. The applications and admissions for the Pharm.D. Program for the past two years are summarized in Table I.

(Continued on page 8)

category. They are Chancellor's Club Associates F. J. Andrews and George T. Cornwell and Chancellor's Club Members Mary L. Curry, H. Q. Ferguson, William Jordan, Banks Kerr, Canie Smith, and Anonymous.

The Foundation remains the primary source of flexible funds for the School of Pharmacy. To date, the majority of the funds made available to the School have been used largely to maintain the status quo. We are, however, pleased that we were able to give two \$1,500 competitive starter grants to two new assistant professors.

Wade A. Gilliam passed away on September 22, 1983, in Winston-Salem. He was faithful and loyal to Pharmacy and the Foundation and a personal friend. He was the second president of the Board of Directors of the Foundation, having followed Roger A. McDuffie in 1958. He served continuously as a Board member from 1946 to 1983, the last few months as an ex officio member. A memorial fund has been established in his memory.

We ask for your continued support as we strive towards excellence in all of our programs. The Foundation is the source of that margin which makes the difference between just being good and excellent.

GREENSBORO

The regular monthly meeting of the Guilford County Society of Pharmacists was held Sunday evening, June 3, 1984 at Swains Steak House in Greensboro. Following the social hour and dinner, the evening's guest speaker, Dr. Sigmund Gould, a Greensboro ophthalmologist, spoke about pre-op and post-op medications used in cataract surgery. Using very interesting slides, Dr. Gould explained the various techniques used in this type of surgery, and the evolution of those techniques.

Following the program, there was a short business session, then the meeting was adjourned.

J. Frank Burton
Secretary-Treasurer

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112 ADDITIONAL NEW NCPHA MEMBERS

Welcome to the 112 members of the North Carolina Pharmaceutical Association who have recently joined for the first time, or rejoined after an absence of at least a year. Added to the 97 new members listed in the March issue of *The Carolina Journal of Pharmacy*, this makes 209 new NCPHA members. Welcome them if you have the opportunity. Our goal this year is 300 new members.

Dawn Allen
Washington

Mohammed Saad Almousa
Chapel Hill

Robert S. Alchin, P.D.
Chapel Hill

Randy Gray Ball, P.D.
Raleigh

Betha Barbee
Statesville

Barbara Jo Barton
Raleigh

Sarah J. Beale
Williamsburg, VA

Karen Beam, P.D.
Statesville

Karen Rebecca Beaver, P.D.
Landis

Yvonne Blackmon
Cary

Gary L. Bowman
Siler City

Hugh Tate Bradsher
Old Fort

Belinda Brewington, P.D.
Pembroke

Charles Buchanan
High Point

Stephen Gerard Buckley
Durham

Jan L. Burrus, P.D.
Canton

Miss. Shirley A. Clifton
Lumberton

Sue Conerly
Wake Forest

Dianne L. Creech
Raleigh

Sally Crews
Greensboro

Connie L. Daughtry, RPh
Smithfield

Ken Dingler, P.D.
Shelby

Kathy Lois Doub, R.Ph.
Tobaccoville

Suzanne Drouillard, RPh
Chapel Hill

Doug Ecklund, P.D.
Matthews

Mark J. Ellison
Greenville

Lynn Etters
Kings Mountain

William E. Evans, Jr., P.D.
Charlotte

J. Lloyd Evans, Jr.
Wilmington

Sandra G. Faucette
Burlington

Ann Flynn
Burlington

Neal F. Fowler, P.D.
Goldsboro

Bart Fox
Jacksonville

Linda J. Franco
Raleigh

Sherri Jo Furr
Charlotte

Tim Gardner, P.D.
Salisbury

Sharon Godwin, P.D.
Chapel Hill

(Continued on page 10)

NEW MEMBERS

Constance Gordon, P.D.
Weaverville

Tara M. Gordon
Weaverville

Ned W. Griffin
Durham

Sandra H. Hak, Pharm.D.
Chapel Hill

Sharon E. Halsey
Lumberton

Martha Jo Harrelson
Lumberton

Mr. & Mrs. Robert P. Harris
Hope Mills

W. E. Hemingway, Jr., P.D.
Greenville

Emily B. Hepler
Charlotte

Tim Hinson
Whiteville

Greg Hinson
Statesville

Gary K. Hobbs, P.D.
Merritt Island, FL

Elizabeth E. Houff, P.D.
Carthage

Wayne Houston, P.D.
Kinston

Elizabeth L. Hunter
Winston-Salem

Rhonda D. Isley
Asheville

Jean Joseph
Raleigh

Earl W. Key, P.D.
Southern Pines

Kathryn R. Krimminger
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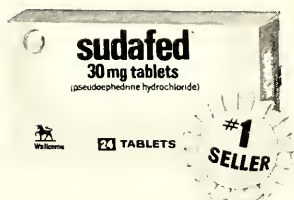
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(Continued on page 12)

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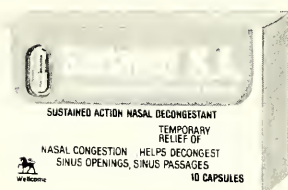
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Greensboro	18	16,000
Wilmington	16	26,000
Asheville	13	19,000
Winston-Salem ..	10	23,000
Goldsboro	9	6,000
New Bern	8	10,000
Salisbury	8	7,000
Burlington	7	5,000
Concord	6	9,000
Fayetteville	6	7,000
Henderson	6	5,000
Gastonia	5	6,000
Hendersonville ..	5	3,000
Kinston	5	7,000
Statesville	5	5,000
Wilson	5	7,000

(From the 1915 Carolina Journal
of Pharmacy, Vol. 1, No. 1)

The latest statistics (1983) from the NC
Board of Pharmacy indicate the current state-
wide ratio is one pharmacist for every 3,620
persons.

THEOPHYLLINE-FOOD INTERACTION

Kathleen M. D'Achille,
Pharm.D.

Director of Clinical Pharmacy
Winston-Salem Health Care
Plan, Inc.
Winston-Salem, NC

Theophylline absorption from conventional release oral tablets and oral solutions has been shown to be affected by accompanying food to a small and clinically unimportant degree.¹ On the other hand, several recent studies have shown that food may have a significant and variable effect on theophylline absorption from sustained-release preparations. This is of concern because many pharmacists routinely recommend that patients take theophylline with meals to reduce gastrointestinal upset.

The effects of food vary from only a slight delay in absorption to a significant increase in the rate and extent of absorption. The specific effect depends on the product formulation and, in some cases, the age of the recipient.

The following summary reviews the information that is currently available regarding the effect of food on absorption from sustained-release theophylline products. This information is slow in accumulating because the FDA has, up to the present, required that theophylline bioavailability studies be performed under fasting conditions.

Theobid Duracap (Glaxo)

Food appears to decrease the rate but not the extent of absorption in adults.² This is considered to be a clinically unimportant effect.¹

Theo-Dur Tablets (Key)

The effect of food is a decrease in the rate of absorption, but not the extent.^{2,3} However, in one study, the bioavailability of theophylline from Theo-Dur 100 mg and 300 mg tablets was 98%,³ while in the other study using the 200 mg tablets, bioavailability was only 80%.² In both cases, the drug was equally bioavailable under fasting and nonfasting conditions.

Theo-Dur Sprinkle (Key)

This product is no longer recommended by the manufacturer for children under the age of six years.⁴ Only 50% absorption occurs in many infants and toddlers between the ages of 8 months and 4 years, possibly due to the effect of food. A large meal was found to markedly impair the absorption of this product.²

Theolair-SR (Riker)

In adults, food was found to markedly decrease the rate of absorption, and to decrease the extent of absorption to a lesser extent from this product.⁷ In children with a mean age of 11 years, food produced a decrease in the rate of absorption and the peak serum level achieved.⁵ It was noted that there were significantly fewer side effects when the drug was given with food.

Antacids have been shown to significantly increase the rate of theophylline absorption from Theolair-SR, but not from Theo-Dur or Slophyllin.¹

Slo-Bid Gyrocaps (Rorer)

This product is incompletely absorbed in some children and infants under the age of six years. It is not clear whether this is due to the effects of food on its absorption, since no study has specifically looked at this factor for Slo-Bid.¹

Theo-24 (Searle)

Food was found to increase both the rate and extent of absorption of this product to the point of producing toxicity. This is due to the fact that Theo-24 is a very slowly and incompletely absorbed product in the fasting state, while food results in "dose-dumping," i.e., rapid and enhanced absorption.¹

Summary

Theobid, Theo-Dur and Theolair can be used with food in adults. Theobid and Theo-Dur can also probably be used appropriately in children six years and older. Theo-Dur tablets can be cut in half if necessary.¹ The delay in absorption when given with food should be kept in mind when obtaining a specimen for serum level monitoring.

(Continued on page 14)

THEOPHYLLINE-FOOD

Theo-Dur Sprinkle and Slo-Bid Gyrocaps are not recommended for routine use in children under the age of 6. Slo-Phyllin Gyrocaps or Somophyllin-CRT are recommended by Hendeles¹ for use in this age group, although they have not been tested with food other than applesauce.⁶

Theo-24 should be administered cautiously and in lower doses if given with food. Every effort should be made to see that the patient takes the drug under the same circumstances each day.

For other sustained-release products, it may be appropriate at this time to avoid routinely advising that they be taken with meals.

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Program participants in the Ralph P. Rogers Award Dinner: left to right Jean Paul Gagnon, Melanie Spencer, Ralph P. Rogers, Jr., and A. H. Mebane, III

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Some of the Class of 1938 together at the Annual Convention. Left to right: Barney Paul Woodard, Annie Louise Woodard, Jean Bush Provo, Jimmy Creech, Vivian Creech and June Bush West.

PHOTO BY COLORCRAFT

MELANIE SPENCER RECEIVES ROGERS AWARD

Melanie E. Spencer, a 4/5 pharmacy student from Swan Quarter, was presented the Sixth Annual Ralph Peele Rogers Memorial Award at a dinner held in her honor May 14, 1984 at the Carolina Inn in Chapel Hill.

The five hundred dollar cash award, given in memory of Ralph Peele Rogers, a former president of the North Carolina Pharmaceutical Association and owner/operator of Rogers Drug Company in Durham for fifty years, recognizes excellence in pharmacy administration. The recipient is chosen annually by the faculty in the Division of Pharmacy Administration based on academic performance and evaluation of a paper written by the students.

Miss Spencer is a member of Kappa Epsilon Fraternity, Phi Lambda Sigma and Rho Chi, the APhA and NCPHA Student Branches and

the Pharmacy Senate. Her hobbies include needlework and reading. She has worked at Kerr Drug and Pungo District Hospital, and at Central Pharmacy in Durham. She plans to pursue a career in retail pharmacy in a professional pharmacy.

Program participants included Dean Tom S. Miya, who gave the Invocation. W. Artemus West, NCPHA President, Dr. Jean Paul Gagnon, Chairman of the Division of Pharmacy Administration; A. H. Mebane, III, Executive Director, NCPHA; and Ralph P. Rogers, Jr., who made the presentation on behalf of his brother, Joseph C. Rogers, his sister, Elizabeth Rogers Millar and himself.

Miss Rogers was accompanied at the dinner by Benjamin B. Cahoon, Raleigh, and her parents, Mr. and Mrs. Roger A. Spencer of Swan Quarter. Previous recipients of the award are B. Scott Dinkins, Jo Marlene Travis, Susan L. Speir, William Kent Tapscott and Sherri Jo Furr.

THE IMPORTANCE OF PHARMACY ADMINISTRATION IN MODERN PHARMACY

by Melanie Spencer

The pharmacist in today's society is no longer a person who merely counts and pours pills behind a counter. He is now recognized as a member of the health care team who has a vast knowledge of drugs and is able to convey that information to other members of the health care team, as well as to patients. In addition, more and more pharmacists are combining the role of pharmacy and manager, or are purchasing and managing stores of their own. The ability to comprehend and make logical business decisions is of vital importance to pharmacists. As is true in all professions, laws governing the field of pharmacy are constantly being added, deleted, or changed. It is the responsibility of the pharmacist to keep abreast of such changes.

Pharmacy Administration courses are an

important link between education and the practice of pharmacy. Courses such as Communications educate future pharmacists in areas that deal with communicating information to patients, physicians, and other members of the health care team. In addition, they give insight as to how to deal with patients and their problems. Knowledge of management and business is also gained in pharmacy administration courses. They provide information about record-keeping, stock, employee-employer relationships, and other business related topics. Law courses educate students on current laws, but perhaps more importantly they provide information concerning sources where future changes in laws can be found.

Knowledge of drugs, their actions, interactions, etc. is essential for pharmacists, but without the information gained in pharmacy administration courses concerning communication, business, and law, it is impossible for the pharmacist to completely and effectively fulfill his role in today's society.

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NARD TO PUBLISH HOME HEALTH CARE HANDBOOK

The National Association of Retail Drug-gists announces plans to publish the *NARD Home Health Care Handbook*, edited by Martin L. Lambert, Jr., R.Ph., Ph.D., Professor, Stamford University School of Pharmacy. Lambert teaches the only required course in home health care offered at the undergraduate level in a college of pharmacy in the country. He is part owner of Lambert's Health Care, Inc. in Knoxville, Tennessee.

The *Handbook* is a project of NARD's Committee on Home Health Care Pharmacy Services, whose members also serve as consultants to the project. It is anticipated that advance copies of the *NARD Home Health Care Handbook* will be available at NARD's exhibit booth, 86th Annual Convention and Exposition, September 30-October 4, 1984, Miami Beach, Florida. Further details on distribution will be announced when finalized.

In 1982, NARD was the first pharmacy association to establish a full-time department dedicated to home health care pharmacy services. Since that time, NARD has launched a host of new services and publications, including: *Home Health Care Pharmacy Bulletin*, *The Independent Pharmacist's Home Health Care Catalog*, *The Home Health Care Product Guide*, *Home Health Care Marketing—A Manual For Retail Pharmacists* (produced jointly with Johnson and Johnson Products, Inc.) and its highly successful Home Health Care Conference and Exposition.

In addition to these services, NARD offers two certification programs for pharmacists in the home health care field. NARD's Health Supports and Appliances (HSA) and Durable Medical Equipment (DME) certification programs recognize pharmacists' (and related personnel) expertise in these areas. The *Handbook* is expected to serve as a required text for candidates interested in qualifying for DME certification.

The scope of the *Handbook* will be broad, covering the following subjects:

- I. INTRODUCTION—definitions, data, projections, rationale for pharmacy

- II. MARKET ANALYSIS—demographic factors, competition, identification of target market
- III. FINANCIAL—costs of adding to an existing practice vs. development of a free-standing center; obtaining capital, capital requirements
- IV. DEVELOPING THE HOME HEALTH CARE DEPARTMENT IN YOUR PHARMACY—space requirements, growth expectations, delivery and installation needs, time factors, use of computers, increase of liability, cash management
- V. INVENTORY—product lines, inventory selection
- VI. MARKETING ACTIVITIES—products, advertising, sales, service
- VII. PERSONNEL—specialized employee services, using current staff members, adding additional employees, consultants on retainer, fee for services, pharmacist as an expert
- VIII. REIMBURSEMENT—government third party payors, private third party payors, accepting assignment, documenting claims
- IX. INTERPROFESSIONAL ACTIVITIES—discharge planners, physicians, long-term care facilities, home health agencies, therapists, social workers
- X. SUMMARY AND CONCLUSION

WAKE COUNTY PHARMACEUTICAL ASSOCIATION

New officers for the Wake County Pharmaceutical Association were installed by Al Mebane Tuesday evening, June 5th at the Kanki Japanese Steakhouse in Raleigh.

The officers for 1984-85 are: Pamela Joyner—President, Connie Upshaw—President Elect, Stan Edmundson—Vice President, Joni Berry—Secretary, John Myhre—Treasurer and Randy Hall—Executive Board Member.

Al Lockamy was presented with the President's Plaque and Pharmacist of the Year Award.

LILLY DIGEST PRELIMINARY REPORT—1984

Averages per Pharmacy	1983		1982		Amount and Percent of Change
	860 Pharmacies		1,528 Pharmacies		
Sales					
Prescription	\$309,307—	57.6%	\$272,527—	54.7%	+ \$36,780—13.5%
Other	277,803—	42.4%	225,494—	45.3%	+ \$ 2,309—1.0%
Total	<u>\$537,110—</u>	<u>100.0%</u>	<u>\$498,021—</u>	<u>100.0%</u>	+ \$39,089— 7.9%
Cost of goods sold	358,583—	66.8%	330,577—	66.4%	+ \$28,006— 8.5%
Gross margin	<u>\$178,527—</u>	<u>33.2%</u>	<u>\$167,444—</u>	<u>33.6%</u>	+ \$11,083— 6.6%
Expenses					
Proprietor's or manager's salary	\$ 31,663—	5.9%	\$ 29,965—	6.0%	+ \$ 1,698— 5.7%
Employees' wages	58,906—	11.0%	56,454—	11.3%	+ \$ 2,452— 4.3%
Rent	13,022—	2.4%	12,018—	2.4%	+ \$ 1,004— 8.4%
Miscellaneous operating costs	59,523—	11.0%	54,439—	11.0%	+ \$ 5,084— 9.3%
Total expenses	<u>\$163,114—</u>	<u>30.3%</u>	<u>\$152,876—</u>	<u>30.7%</u>	+ \$10,238— 6.7%
Net profit (before taxes)	\$ 15,413—	2.9%	\$ 14,568—	2.9%	+ \$ 845— 5.8%
Total income	<u>\$ 47,076—</u>	<u>8.8%</u>	<u>\$ 44,533—</u>	<u>8.9%</u>	+ \$ 2,543— 5.7%
Value of inventory at cost and as a percent of sales					
Prescription	\$ 33,238—	10.7%	\$ 29,642—	10.9%	+ \$ 3,596—12.1%
Other	46,924—	20.6%	46,574—	20.7%	+ \$ 350— 0.8%
Total	<u>\$ 80,162—</u>	<u>14.9%</u>	<u>\$ 76,216—</u>	<u>15.3%</u>	+ \$ 3,946— 5.2%
Annual rate of turnover of inventory	4.6 times		4.5 times		
Number prescriptions dispensed					
New	14,149—	49.1%	13,421—	48.8%	+ 728— 5.4%
Renewed	14,640—	50.9%	14,080—	51.2%	+ 560— 4.0%
Total	<u>28,789—</u>	<u>100.0%</u>	<u>27,501—</u>	<u>100.0%</u>	+ 1,288—4.7%
Average prescription charge	\$ 10.74		\$ 9.91		+ \$ 0.83— 8.4%
Size of floor area	2,504 sq. ft.		2,524 sq. ft.		+ \$ 16.46— 8.4%
Sales per square foot	\$211.54		\$195.08		
Hours open	62 hours		62 hours		

A PREVIEW OF INDEPENDENT COMMUNITY PHARMACY—1984

This year's preliminary *Lilly Digest* report, based on the 1983 operating statistics of 860 independent community pharmacies, indicates that the higher cost of goods sold was offset by lower total expenses resulting in a percentage net profit unchanged from the previous year. When the income and expense statement items are compared with *Lilly Digest* figures for 1982, they show that . . .

Total sales reached a new high of over \$537,000, up almost 8 percent (more than \$39,000) over the 1982 figure. This rate of increase is somewhat lower than the average annual growth of 9.7 percent observed during the past decade. Prescription sales advanced 13.5 percent over the previous year's figure and significantly outpaced other sales, which grew just 1 percent. Prescription sales continued to grow faster than other sales and accounted for 57.6 percent of the average store's volume.

Gross margin declined to 33.2 percent of sales (down from 33.6 percent in 1982). Historically, this is the lowest gross margin level since 1953. Total expenses decreased to a new low of 30.3 percent of sales (down from 30.7 percent in 1982). The combined effect of these changes was that net profit before taxes remained at 2.9 percent of sales.

Although total expenses fell percentage-wise, they did rise in dollars (up over \$10,000, or 6.7 percent from the 1982 figure). Also, the average proprietor's salary was higher in dollars (up about \$1,700) but decreased as a percent of sales to just under 6 percent. Similarly, employees' wages rose in dollars but fell to 11 percent of total sales, the lowest level since 1956. Rent remained unchanged at 2.4 percent of sales, but was about \$1,000, or 8.4 percent higher for the year. Miscellaneous operating costs rose over \$5,000, an increase of 9.3 percent. However, these miscellaneous costs took the same share of sales dollars as the previous year—11 percent. Dollarwise, net profit before taxes showed an \$845 increase—up almost 6

percent from the previous year. Total income (proprietor's salary plus net profit before taxes) gained 5.7 percent in dollars, but decreased slightly as a percent of sales from 8.9 to 8.8 percent.

Prescription and merchandise inventory required more dollars during 1983; however, both declined as a percent of sales (from 10.9 to 10.7 percent and from 20.7 to 20.6 percent respectively). The prescription department's sales productivity moved up to \$9.31 per stock dollar (1.3 percent higher), whereas other merchandise productivity rose to \$4.85, up one penny from the previous year.

The share of new prescriptions increased by 728 to 49.1 percent of total prescriptions dispensed (up 5.4 percent from 1982). Renewed prescriptions were higher by 560 (up 4 percent) over the previous year's figure and accounted for 50.9 percent of total prescriptions dispensed. As a result, total prescriptions continued a three-year growth trend, with an increase of 1,288 prescriptions dispensed. At 28,789 prescriptions dispensed during 1983 (up 4.7 percent), a new high was established. The average prescription charge rose to \$10.74 during 1983, an increase of 83 cents (8.4 percent) over the 1982 figure of \$9.91. This was the first time in *Digest* history that the average prescription charge exceeded \$10.

Merchandise selling space in the average independent community pharmacy fell by 20 square feet during 1983, but remained essentially in the 2500 square foot range. Sales productivity per square foot of floor area advanced \$16.46 from the year earlier (up to \$211.54), an 8.4 percent increase. The hours of operation in the typical *Lilly Digest* pharmacy remained unchanged during 1983 at 62 hours per week.

The following table summarizes the preliminary *Lilly Digest* report of the operating figures of 860 independent community pharmacies and compares these with the 1983 *Lilly Digest* averages from 1,528 pharmacies. The annual *Lilly Digest* will be completed and distributed during September of this year.

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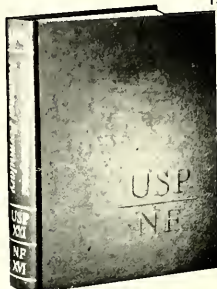
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In announcing the new subscription plan, Dr. William M. Heller, USPC Executive Director, said that "(t)his new subscription service will provide the practitioners with the advantages of loose-leaf, but without the mess and inconvenience."

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Subscriptions may be entered through The North Carolina Pharmaceutical Association.

DEERE-POWELL JOINS FACILITY SERVICES

Helen Deere-Powell, a 1976 graduate of the UNC School of Pharmacy has been appointed Pharmacist Consultant to the Survey and Consultation section of the Division of Facility Services, Department of Human Resources, effective August 6, 1984. Her responsibilities include assessing the status of pharmaceutical services in health care facilities such as long term care facilities, hospitals, rural and home health care facilities. Ms. Deere-Powell is a Raleigh resident and formerly was Director of Pharmacy Services at Holly Hill Hospital.

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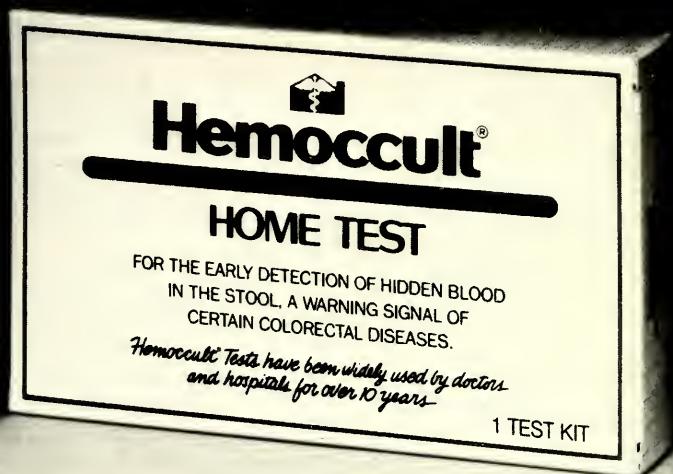
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FROM OUR READERS

To the Editor:

Eric Parker's recent commentary, "Why Pharm. D.?", reflects two sentiments regarding pharmacy education, skepticism and frustration, which are shared by a number of practicing pharmacists, pharmacy academicians and pharmacy students alike. Commendably, his comments serve to focus attention on several issues relating to the structure and content of the undergraduate and post-baccalaureate pharmacy curriculum. Unfortunately, several of his remarks are also inaccurate, in certain cases they misrepresent fact, and in general they are misleading and require clarification.

Parker's initial statement regarding the 'dichotomy in professional degrees' is inaccurate. A dichotomy in *professional* degrees does not currently exist in pharmacy education. The traditional entry level B.S. degree is an undergraduate academic degree while the Pharm.D. is a *professional* doctoral and, in most cases, post-baccalaureate degree. (In fairness, I believe he was alluding to the dichotomy in entry level degrees in the profession, an issue which *is* confusing and should *be* resolved.) Similarly, his statement that the Pharm.D degree represents a "futile effort by pharmacy educators to create a quasi doctoral degree program which would mandate respect for the profession merely by virtue of its title" is incorrect on two counts and inappropriate on a third. It certainly cannot be stated that the attempt to create a degree program has been futile; in fact, the degree is offered in 36/72 schools of pharmacy nationwide and the Pharm.D. degree represents the single entry-level degree offered in 7 of these schools. Similarly, his use of the term "quasi doctoral" is also inaccurate. The Doctor of Pharmacy degree is a *professional* doctoral degree recognized by the administrative hierarchies of these 36 institutions. To additionally suggest that the only impetus for development of the Pharm.D. degree was a desire to "mandate respect for the profession" fails to consider the thirty year history of the development of the degree itself. It also fails to account for the differences that exist between an academic doctoral degree (Ph.D.) and a professional doctoral degree (M.D., D.D.S., Pharm.D.), both of which are adminis-

tratively considered to be post-baccalaureate degrees by the University of North Carolina at Chapel Hill. Considering these omissions, I would challenge his qualifications to describe "traditional academic standards for defining a doctoral program" or even discuss common attributes of academic programs. It is also questionable that the Pharm.D. degree is perceived as "undeserved" or "ill-defined" by knowledgeable individuals. Practitioners possessing the Pharm.D. degree are in notable demand in academia, industry, regulatory affairs and, most importantly, in practice, both in inpatient *and* ambulatory settings. As an aside, the author's reference to the P.D. designation as a degree is simply incorrect. It is a professional designation, adopted by professional organizations (or boards of pharmacy) and does not constitute a *degree*, just as the "RPh" used by Parker constitutes a designation. (Except that neither legal nor professional support for the use of "RPh" any longer exists in North Carolina, while the P.D. designation has been officially adopted by the North Carolina Pharmaceutical Association.)

The major focus of Parker's comments concerns the content of the current baccalaureate pharmacy curriculum. Unfortunately, he employs a hackneyed and simplistic view of complex issues in pharmacy education and practice to support his arguments. If he sincerely wishes to avoid the creation of two classes of pharmacists, he should avoid stating that the training requirements for 'clinical practitioners in a hospital environment' and those for 'pharmacists pursuing careers in other area of practice (e.g. community practice)' are different. Is the *practice of pharmacy* (not its business management) in the community setting markedly different from that in an institutional setting? Does the failure of pharmacists in selected practice settings to apply knowledge gained in their education to the care of their patients suggest that the knowledge itself is unnecessary or inappropriate? He states that "community pharmacists require extensive knowledge of business and financial principles in order to maintain competitive and solvent practices" but fails to mention that the same knowledge of business and financial principles is equally important to the institutional pharmacy

(Continued on page 28)

FROM OUR READERS

practitioner who is responsible for an annual departmental budget that may substantially exceed that of a community pharmacy. A more appropriate approach to addressing his concerns is not necessarily to increase the business-related content of the pharmacy curriculum. Pharmacy is not a business. It is a *profession*, which must be practiced in a business-like manner. Pharmacists should understand that business managers are available to assist in practice management who have the specific skills and expertise necessary to maintain the "competitive and solvent practices" Parker mentions. It is hard to disagree with his assertion that elimination of course duplication and outdated courses is in order in most schools of pharmacy. Some of the current content of the pharmacy curriculum is unnecessary for pharmacists whether they practice in the institutional setting, the community setting, or pursue advanced aca-

demie or professional degrees. However, his proposed solution to problems of curricular deficiencies is contradictory to his original premise of eliminating the distinctions among practitioners. To support an even more variable system of post-baccalaureate, degree-oriented, functional specialization would factionalize the profession even more.

Although I am disappointed at Parker's failure to develop his points in a logical and intellectually competent fashion, I do sincerely commend him for taking time to express concern about a major philosophical issue in pharmacy education and practice. Perhaps, had he entered a post-baccalaureate *professional* doctoral program, the development of his reasoning and writing skills might have been better served.

Sincerely,

William T. Sawyer, MS
Charlotte, NC

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COMMITTEE REPORT
EMPLOYER-EMPLOYEE RELATIONS
North Carolina Pharmaceutical Association
Presented at the 104th Annual Convention
April 8, 9 & 10, 1984, Chapel Hill

The Employer-Employee Relations Committee of the North Carolina Pharmaceutical Association met at the Institute of Pharmacy on November 6, 1983 and on February 5, 1984. Committee members present included Sue Hudson (Chairman), Betsy W. Rullman, Donald V. Peterson, Olen Clyde Naylor, Patricia Giddings, Henry Smith, and Ernest J. Rabil (Advisor). William A. Merrill was unable to attend. Mr. Al Mebane also participated in the Committee discussions.

1. *Continuing Education.* The committee encourages the cooperation and support of the employer to permit and encourage their employees to attend continuing education seminars, the employer allowing for some time off, supportive personnel, and financial support for these seminars as much as possible. The committee further recommends that recent graduates and prospective employees inquire about the provisions available in this regard during their job interviews. The committee discussed the lack of communication in regard to the availability of continuing education programs and the lack of variety and relevance of some programs for all pharmacists. After much discussion a resolution was drafted and forwarded from our committee to the Committee on Continuing Education.
2. *Management Training Courses.* The committee recommends that some management training courses be made available for students in the School of Pharmacy (possible as an elective course) and for practicing pharmacists through continuing education programs. The committee also recommends that these courses allow input from the pharmaceutical association since the experience of some association members would prove to be a valuable resource in regard to management training.
3. *Hospital Pharmacy Directors.* It was brought to the attention of the committee that the Pharmacy Department still comes under the Nursing Department in the hospital

organizational chart in some hospitals. The committee recommends Pharmacy Directors in this situation bring this issue before the hospital administrator and ask that the Pharmacy Department and Nursing Department be made equal under the supervision of the hospital administrator.

4. *Job Interviews and Employee Evaluations.* The committee noted that the employer has the right to expect certain things from the employee under the conditions of employment; these expectations to include loyalty, good customer relations, reasonable professional relations, NO DRUG ABUSE, dependability, etc. These expectations should be emphasized by the employer during the job interview. The employer should have a system of employee evaluations, these evaluations being reviewed at least semi-annually with each employee. The employer should inform new employees of his/her system of evaluations during job interviews and the first evaluation of new employees should be completed within three months after hiring to correct any problems and then evaluations set at least semi-annually thereafter. Employee evaluations would open a direct line of communication between the employer and employee and allow each to know what is expected of the other in regard to the job. Employee evaluations allow a system of goal-setting, a system of detecting possible problems of employment before they get out of hand, and on-the-job management training of the employees involved. The committee further recommends that each employee maintain a file of work achievements, problems, etc. to discuss with their employer during evaluations, and that the employee also maintain a file of continuing education credits.
5. *Polygraph Testing, Chemical Testing.* After much discussion, the committee concluded that the employer has the right to use any management tool deemed necessary to con-

(Continued on page 30)

EMPLOYER-EMPLOYEE RELATIONS

duct his business properly, and to provide pharmaceutical services, and to protect the public. Polygraph testing and chemical testing are considered to be valuable management tools and should be reserved as such. It was also noted that other management tools, such as "shoppers," have proven to be valuable to employers.

6. *"Impaired Pharmacists Task Force."* The committee discussed the benefits of this task force and encourages all employers and employees to disseminate its use. The committee recommends that this task force be extended to be made available to students at the UNC School of Pharmacy. The committee feels that this task force would be of great benefit for those students who might already be involved with problems of alcohol and/or drug abuse.

7. *Personal Use and/or Illegal Sale of Drugs by Pharmacists.* The committee voiced great concern over a growing problem within our pharmacy community in regard to the increase personal use and/or illegal sale of drugs by some pharmacy students and practicing pharmacists. A resolution was drafted in this regard and submitted to the Executive Committee of NCPHA. This resolution will be brought before the Convention by the Resolutions Committee.

COMMITTEE MEMBERS

Sue Hudson, Raleigh, Chairman
Patty Giddings, Chapel Hill, William A. Merrill, Morganton,
Olen C. Naylor, Greenville, Donald V. Peterson, Durham,
Betsy Rullman, Wilmington, Henry L. Smith, Carrboro,
Ernest J. Rabil, Winston-Salem.

The Carolina Journal of Pharmacy

Published quarterly by the William Simpson Pharmaceutical Society of the University of North Carolina School of Pharmacy at Chapel Hill.

Vol. I	MAY, 1915	NO. 1
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The subscription price of this periodical is fifty cents a year.

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GREETINGS

THE CAROLINA JOURNAL OF PHARMACY makes its debut this month as a quarterly publication devoted to the interests of the students, clerks and druggists of North Carolina.

THE JOURNAL, is the official organ of the William Simpson Pharmaceutical Society, an organization composed of members of the Pharmacy School of the University of North Carolina, the purpose of which is to promote the science of pharmacy.

The editors of THE JOURNAL are making no glaring statements about the wonderful things they are going to do. They simply promise to put their energies and love-of-service into the pleasant task of writing a journal about pharmacy in this State and will give of the best they have to the undertaking. They will be guided by experience and by the wishes of the readers and will endeavor to make each succeeding issue an improvement over the one preceding.

The hearty co-operation of the North Carolina druggists and a share of their sympathy is desired by THE JOURNAL.

(From the First Issue)

COMMITTEE REPORT
CONTINUING EDUCATION
North Carolina Pharmaceutical Association
Presented at the 104th Annual Convention
April 8, 9 & 10, 1984, Chapel Hill

The Continuing Education Committee met on November 6, 1983 and again on March 4, 1984 at the Institute of Pharmacy. After much discussion and debate the committee voted 7 for and 1 abstaining on a resolution supporting mandatory continuing education in North Carolina. The resolution was then sent to the Resolutions Committee with attendant recommendations.

Resolution:

WHEREAS, the Pharmacy Practice Act permits the North Carolina Board of Pharmacy to mandate Continuing Education, and

WHEREAS, a need exists among the state's pharmacists to be informed of new developments in Pharmacy and Medicine,

BE IT RESOLVED THAT the North Carolina Pharmaceutical Association endorse implementation of mandatory continuing education with the attendant standards of quality and safeguards against undue hardships.

Recommendations: If the above resolution is adopted the Committee suggests that the following recommendations accompany it when presented to the Board of Pharmacy.

We recommend that:

1. the Board of Pharmacy or a Board Committee approve providers and that these providers include but not be limited to American Council on Pharmaceutical Education (ACPE) approved providers, Area Health Education Centers, and state pharmaceutical associations.
2. ten hours per license renewal period be required and that one (1) hour be defined as 0.1 Continuing Education Units (CEU) or 60 minutes. (1.0 CEU equals 10 contract hours)
3. a self-assessment survey be included at the end of each program, and,
4. a balance of contact hours and other modes of continuing education be considered.

Discussion: The first committee meeting on November 6, 1983 was devoted to considering the pros and cons of mandatory continuing education. A lively discussion ensued which centered around CE requirements in other states, CE requirements for other professions, continuing education vs continuing competency or relicensure, CE program content and approval, and accountability for hours earned. A list of questions was generated and the chairman agreed to gather information on these topics and to distribute it to committee members for their perusal.

The second meeting on March 4, 1984 was devoted to answering the questions generated in the first meeting and on whether or not to propose a resolution on mandatory CE in North Carolina. According to the *1984 Status Report on Continuing Education* published by the ACPE, 30 states and Puerto Rico now require mandatory continuing education for pharmacists relicensure. Of these 1 requires 45 hours every 3 years, 1 requires 35 hours every 3 years, 10 require 30 hours every 2 years, 12 require 15 hours every year, 1 requires 12 hours every year, 2 require 10 hours every year, 1 requires 8 hours every year, and 2 require 6 hours every year. Of the states who specified 21 do not allow carry-over of credit from one licensure period to another. No other profession in North Carolina requires CE for relicensure, however, nursing has a strong voluntary program, and Family Practitioners have a mandatory recertification exam every five years that does not affect their general medical license. "A Survey of State Pharmacy Board Members and Continuing Education Providers" performed by Jane T. Osterhaus and Jean Paul Gagnon in 1982 concluded that "the overall attitude of board members and continuing education providers towards continuing education is favorable. However, there is a need to review regulations pertaining to mandatory continuing education. A relicensure examination was the most highly favored method to insure

(Continued on page 33)

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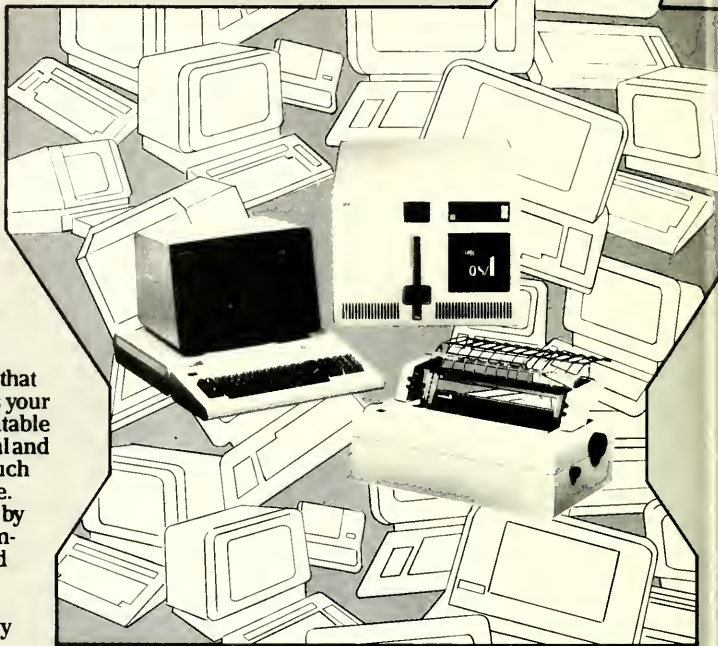
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CONTINUING EDUCATION

competency while mandatory continuing education was viewed as most likely to increase knowledge, acceptable to pharmacists and relatively easy to administer." In addition a January 1984 survey of North Carolina pharmacists by the Board of Pharmacy reveals that 55% of the state's pharmacists are for mandatory CE, 43% are against, and 2% have no opinion. The committee also discussed CE program content, availability, and accreditation and provisions for undue hardship in acquiring CE hours. As per statute the committee recognizes that the Board of Pharmacy will approve providers of CE. It is the committee's opinion that both ACPE and some non-ACPE programs be approved. The non-ACPE approved programs could include local pharmaceutical association meetings where the educational component does not meet ACPE length requirements. The AHEC's or state pharmaceutical associations could possibly approve these programs while maintaining standards of quality. The committee also recognizes that each individual pharmacist is responsible for accounting for CE hours accrued. In cases of severe hardship such as prolonged illness or disability we recommended some waiving of CE requirements.

In summary the Continuing Education Committee of the North Carolina Pharmaceutical Association recommends the approval by the convention of a resolution supporting mandatory continuing education in North Carolina.

Respectfully submitted,

Joni I. Berry, R.Ph.
Chairman

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NORTHEASTERN CAROLINA PHARMACEUTICAL ASSOCIATION

The Northeastern Carolina Pharmaceutical Society held its regular meeting Wednesday, June 20th at Cobb's Restaurant in Williamston, NC. Approximately thirty members were present for dinner, the business meeting and a presentation by Ed Nye, The NCPHA and Pharmpac Lobbyist, Al Mebane with the NCPHA, and Henry Smith with Pharmpac.

After the social hour, several items were discussed at the business meeting. Briefly these included: A report from the Treasurer and report of the total number of members paid; A report from the officers of The Northeastern Carolina Pharmaceutical Society on their meeting with representatives of the E.C.U. School of Medicine Family Practice Center Pharmacy—concerning their dispensing medications purchased on State contracts to out-patients in direct competition with area Pharmacies.

An informative presentation on Pharmpac and its functions and how it determines which Political Candidate to contribute to. Henry Smith, who heads Pharmpac also informed The Society of a Treasurer's report and how Pharmpac raises its monies.

Al Mebane with the NCPHA informed the society of the importance of Pharmpac and the importance of supporting Ed Nye, The NCPHA and Pharmpac lobbyists. There was considerable discussion given to Third Party Prescription and their growing involvement in North Carolina. Also discussed was HMO and their threat to Retail Pharmacy.

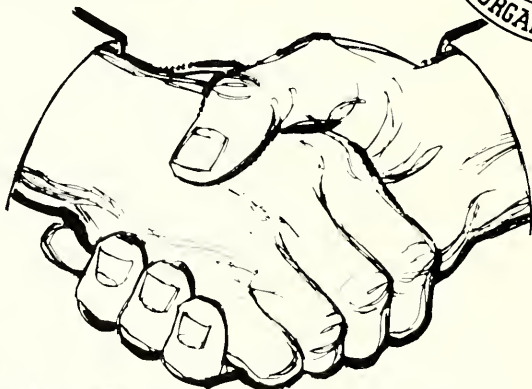
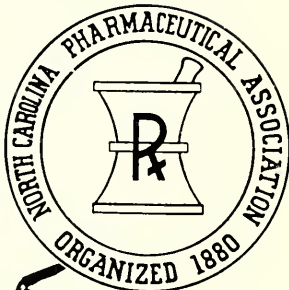
Ed Nye spoke on his actions as the lobbyist for NCPHA and Pharmpac. He also spoke of his past terms in the General Assembly. He informed the Society members of the importance of knowing your representatives and contacting them of Pharmacy matters under consideration by the General Assembly.

William H. Brown, RPH
Secretary-Treasurer

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MARRIAGES

CHARLOTTE ANN MATHENY and WILLIAM RANDOLPH MIZE, JR., both of Greensboro were married Saturday, July 28, 1984 in Kimball Lutheran Church, Kannapolis.

The couple are graduates of the School of Pharmacy, University of North Carolina in Chapel Hill and are employed by Revco Drugstores, Inc.

BIRTHS

GREG and Debbie SOUTHERN, of Walnut Cove, announce the birth of a daughter, Lauren Brooke, on May 23, 1984. Lauren weighed 7 lbs. 14 oz. and was 20½ inches long. Debbie is a 1980 graduate of the UNC School of Nursing and GREG is a 1979 graduate of UNC School of Pharmacy.

DEATHS

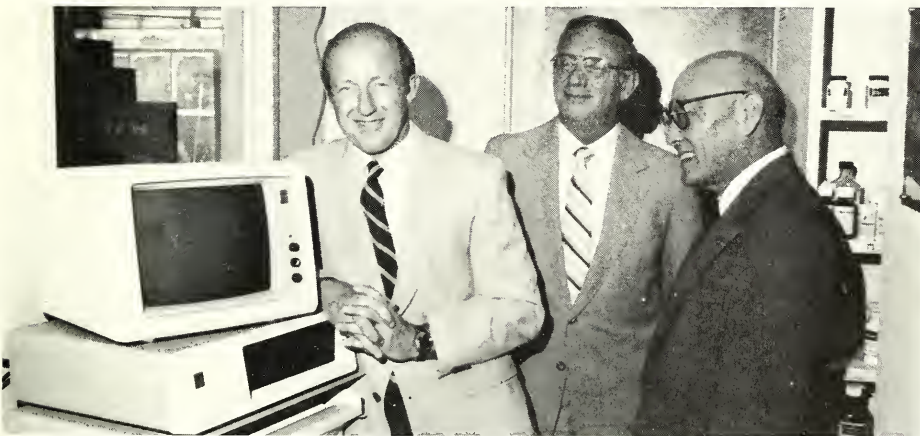
LOU EASTWOOD CULBREATH

Lou Eastwood Culbreath, Southern Pines, a life member of the Woman's Auxiliary, died June 21, 1984 at her home. Mrs. Culbreath owned and operated Culbreath's Surgical Supply at Pinehurst Medical Center. She served as President of the Woman's Auxiliary in 1953-54.

SCHOOL RECEIVES COMPUTER

The UNC School of Pharmacy has received a pc I Pharmacy Computer System from Dr. T. C. Smith Company, Inc., Asheville, to be used in the dispensing lab to help students learn about pharmacy computers.

The pc I Professional System features IBM hardware (the IBM PC) and will accept off-the-shelf software for other uses such as word processing, payroll, spread sheets, and computer message systems, such as the Source, and can even tie into travel agent reservation systems to assure the lowest price fares on flights, cruises, etc. The fully integrated pharmacy system has a complete range of programs to simplify the pharmacy operation. Included are *Prescription filling routines, drug interactions* (three levels), *accounts receivable, accounts payable, general ledger package, and nursing home package.* Third Party claims are part of the prescription filling package and can accommodate and complete Medicaid and Universal claim forms, PCS, PAID and other plans. The system will handle up to 400 prescriptions daily on a single terminal. Dr. T. C. Smith Company, Inc. is composed of Dr. T. C. Smith Drug Division, Asheville, W. H. King Drug Division, Raleigh, and Carolina Surgical Supply Division, Raleigh.



Dean Tom S. Miya views the pc I Pharmacy Computer system given the school by the Dr. T. C. Smith Company. With Dean Miya are (left to right) Canie Smith from the Dr. T. C. Smith Drug Division, Asheville, and Tom Sanders from the W. H. King Drug Division.

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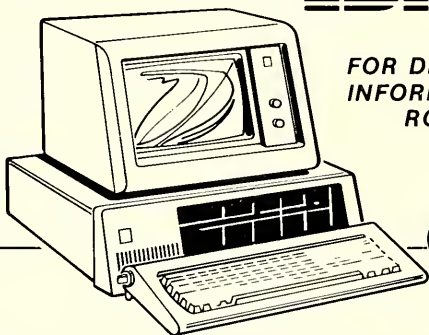


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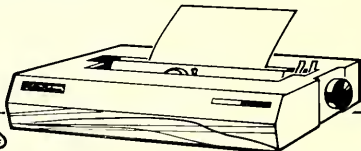


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THE CAROLINA JOURNAL of PHARMACY

AUGUST 1984 VOLUME 64 NUMBER 8



David D. Claytor, NCPHA Past President, right, presents Hall of Fame in Pharmacy certificate to H. C. McAllister. Story on page 4 Photo by Colorcraft

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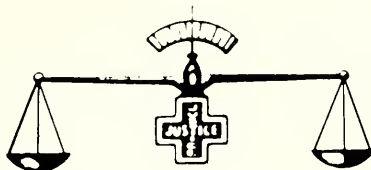
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McALLISTER INDUCTED IN HALL OF FAME IN PHARMACY

Harmon Carlyle McAllister, Chapel Hill, long-time Secretary Treasurer of the North Carolina Board of Pharmacy, was inducted into the North Carolina Pharmaceutical Association *Hall of Fame in Pharmacy*, Sunday night, April 8, 1984, during the 104th Annual Convention of the NCPHA.

The presentation was made by David D. Claytor, immediate past president of the NCPHA and former member of the Board of Pharmacy who served with McAllister. The *Hall of Fame in Pharmacy* award is the most coveted award given by the Association, and recognizes extended and meritorious service to Pharmacy in North Carolina. Those inducted in the past are P. A. Hayes, Greensboro; F. O. Bowman, Chapel Hill; J. Floyd Goodrich, Durham; E. Clifton Daniels, Zebulon; Charles M. Andrews, Burlington; C. T. Council, Durham; Kelly E. Bennett, Bryson City; Carl Durham, Chapel Hill; Dr. Henry R. Totten, Chapel Hill; W. J. and Vivian Smith, Chapel Hill; and Jesse M. Pike, Concord. Tributes to McAllister were given by current members of the Board of Pharmacy Bill Adams, Bill Randall and Harold V. Day. They told of McAllister being a mentor and a tormentor, his commitment to assuring competency in pharmacy practice, and his thrift. Many of the current standards of practice were developed by "Mac." He was a man with vision, easily one of the most dominant figures in North Carolina pharmacy history but never one to put himself before his work.

McAllister served as secretary-treasurer of the North Carolina Board of Pharmacy from 1945 to 1976. Through his involvement with the American Council on Pharmaceutical Education, he improved the quality and standards of student education. He was a part-time faculty member of the UNC School of Pharmacy for fifteen years, from 1960 to 1975. Mac was a sponsor and a member of the first Board of Directors of the North Carolina Pharmaceutical Research Foundation (now the Pharmacy Foundation of North Carolina, Inc.) McAllister went to Chapel Hill planning to study medicine. He was admitted to

medical school but the start of the Depression disrupted these plans. He had been working for a pharmacist in Albemarle who helped him become licensed as a pharmacist's assistant.

He returned to UNC and worked his way through pharmacy school at Sutton's Drug Store, managing the rental rooms upstairs and selling peanuts at the football games, as well as any other jobs that came along. He finished his classes in March 1934 and set up a pharmacy at Watts Hospital in Durham. He applied for a job as inspector for the Board of Pharmacy and was appointed in 1937. In 1944 he was elected to the Board and in 1945 was selected as its third secretary treasurer.

As Secretary Treasurer of the Board of Pharmacy, McAllister was able to influence the practice of pharmacy through development of rules and regulations, and through innovations in the testing of candidates for licensure. He was a pioneer in integrating pharmacies into hospitals, thereby improving greatly the delivery of pharmaceuticals to inpatients. He was active in the American Pharmaceutical Association, serving in many capacities, including chairman of the legislative committee, chairman of the nominating committee and chairman of the House of Delegates. He was also a leader in the National Association of Boards of Pharmacy. He was chairman of the Internship Committee, chairman of the Executive Committee, and served as President in 1961. Through his efforts on the committee on Examinations, many of the current testing procedures used on the NABPLEX were developed, including the concept of an integrated examination. During his career, he was written many articles published in state and national magazines and spoken to countless organizations on the legal aspects of pharmacy practice.

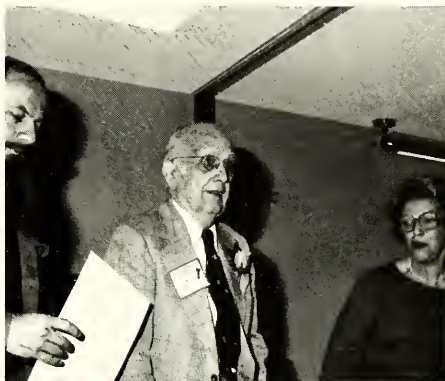
McAllister and his wife of nearly fifty years, Dot, still live in Chapel Hill. He is still painting and doing his cabinetry. His great love for pharmacy still burns. He is proud to have issued almost half the pharmacist licenses issued since the Board of Pharmacy was founded in 1881, but "that was just part of his job."

NORTH CAROLINA
PHARMACEUTICAL ASSOCIATION
HALL OF FAME IN PHARMACY
HARMON CARLYLE McALLISTER
For distinguished services
to the advancement of Pharmacy
in North Carolina



Bill Adams tells of the innovative testing techniques initiated by H. C. McAllister.

Photo by Colorcraft



H. C. McAllister, center with son John, and Doris Claytor.

Photo by Colorcraft



Harold Day speaks of his "mentor and tormentor," H. C. McAllister.

Photo by Colorcraft



Bill Randall relates anecdotes about McAllister, while Dave Claytor listens.

Photo by Colorcraft



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On graduation day we were all a little glad, a little sad and a lot wiser.

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We will always treasure them as friends.

From left to right:
Sandra M. Sims - West Virginia University
Michael C. Shuck - Rutgers College of Pharmacy
Terrence G. Hustand - University of Southern California
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CORRESPONDENCE COURSE**COUNSELING CONSUMERS ON SUNBURN AND PHOTSENSITIVITY**

By J. Richard Wuest, R.Ph., Pharm.D., Professor of Clinical Pharmacy, University of Cincinnati, Cincinnati, OH
and

Thomas A. Gossel, R.Ph., Ph.D. Professor of Pharmacology, Ohio Northern University, Ada, OH

Goals

The goals of this lesson are to:

1. discuss the etiology and treatment of sunburn and photosensitivity reactions;
2. discuss the pharmacology and therapeutics of drugs used to treat sunburn and photosensitivity reactions.

Objectives

At the completion of this lesson, the successful participant will be able to:

1. demonstrate an understanding of how sunburn affects the skin;
2. choose the appropriate agents for treating minor burns and sunburn;
3. decide when the consumer should be referred to a specialist.

One part of the body that is often taken for granted and not thought of in the same terms as the heart, liver, kidney, and other vital organs is the skin. The skin is the largest organ of the human body comprising one-sixth of the body's weight. At any given time, the blood vessels transversing through the skin contain one third of the body's blood. The skin serves many important functions for the body including acting as a barrier to invasion of microorganisms, and controlling fluid and electrolyte loss through perspiration. It also assists in regulating body temperature; it is an important sensory organ that responds to touch, pressure, temperature change, and pain; and it helps hold us together in our shape. Few other injuries to the skin destroy its ability to function as do burns.

Introduction to Burns

In excess of two million serious burns occur in this country each year. Approximately one hundred thousand of these burns require hospitalization and about ten thousand people die of burn injury in a given year. While burns result from many causes (i.e., contact of the skin with heat, electricity, infrared and

ultraviolet light rays, ionizing radiation, and chemical agents), most mild burns are caused by overexposure to the ultraviolet rays of the sun. Most severe burns are caused by heat from flames, hot liquids, or direct contact with hot objects.

The direct outcome of a burn injury is coagulation of protein within the cells resulting in tissue necrosis. This destroys the skin's ability to serve its many purposes.

Traditionally, burns have been categorized as first, second, or third degree with the differentiation based mainly on the size of the area affected and the depth of the wound. It should be pointed out that many thermal burn wounds have more than one classification.

First degree burns are treatable on an ambulatory basis. As stated above, the most common cause of first degree burns is overexposure to the sun's ultraviolet rays. There is generally only superficial epithelial cell damage exhibited by localized areas of redness which blanch to white on pressure, due mainly to the body's normal inflammatory response to injury. Scarring does not occur in first degree burns and they generally heal themselves within three to four days.

(Continued on page 20)



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TABLE 1
Classification of Burns

	First	Second	Third
Depth of skin injured	Partial; superficial cells of epidermis	Partial; upper level of dermis	Entire depth
Cause	Sun, mild steam, scald, hot water	Excessive sun, boiling water, short blast of intense heat, contact with very hot objects for short period	Prolonged exposure to intense heat, immersion in scalding liquids, chemicals, direct contact with flame, electricity
Pathology	Vasodilation and hyperemia, no loss of dermal continuity	Coagulation of skin protein and necrosis of epidermis, may involve upper dermis, intact skin appendages	Coagulation of skin protein and necrosis of epidermis and dermis, including skin appendages
Appearance	Warm, tingling redness which blanches on pressure	Painful, weeping, blistering. Responds to touch. Skin appendages intact	Brown-to-black or white surface, exposed deep tissues. No response to touch. Skin appendages destroyed
Outcome	Heals in 3 days	Usually heals in 1 month, without scarring, may scar	Total & irreversible damage, skin graft required

Adapted from Health Practitioner, 5/77

Second degree burns can be caused by excessive sun exposure, contact with excessively hot objects for a short period of time, short blasts of intense heat, and boiling water. Second degree burns destroy the entire epidermal layer and may destroy the upper level of the dermis. They are characterized as weeping, blistering, beefy red wounds. The pain receptors and nerve fibers are generally intact and there is pain on touching second degree burns. If the skinned appendages such as hair shafts, sweat and sebaceous glands remain intact and infection is prevented, regeneration and spontaneous healing is possible. With proper care of second degree burns, the healing process usually takes about a month.

Third degree burns result from prolonged exposure to intense heat, flames, electricity, chemicals, or emersion in scalding liquids. The entire epidermis and dermis are destroyed

as are all skinned appendages with varying amounts of subcutaneous fat and muscle. Since the sensory nerves are destroyed, third degree burns cause no pain and do not respond to touch. Because the skinned appendages have been destroyed, regeneration of epithelium and spontaneous wound healing is rare; skin grafting is often necessary to completely heal the wound.

Although it is a matter of opinion, it is generally considered that first degree burns are self-treatable. Second degree burns of less than fifteen percent of the body or third degree burns of less than two percent of the body (depending on the area involved) can be treated on an ambulatory basis with medical supervision. Second degree burns of greater than fifteen percent or third degree burns of greater than two percent require hospitalization and rigorous treatment. The classification and pathology of burns are listed in Table 1.

Therapy For Mild First Degree Burns

The immediate goal of treating first degree burns is to control pain and prevent infection if the skin is broken. Whether or not the skin is broken, pain can be controlled by application of cold as soon as possible. This can be done either by soaking the affected area in cold water, applying wet towels soaked in ice water, or applying ice itself. The application of cold is effective because burned skin retains enough heat to extend the coagulation of protein to surrounding tissues. Cold is a local anesthetic in that it "deadens" pain receptors and, through its vasoconstrictor activity, reduces local edema and the reactive hyperemia that the body's inflammatory response will produce. The individual should keep the cold applications on the area until it is free of pain, both with or without such applications. This may take from a few minutes to an hour.

After the emergency situation has been alleviated, the wound should be kept clean. For mild burns, it is generally agreed that neither dressings nor medications are necessary. However, for the patient's psychological state, an emollient type cream may be soothing. Whenever there is doubt about the severity or extent of a burn, the patient should be referred to an emergency care facility. It is generally agreed that if there is any chance that the wound will require physician treatment, greasy ointments should not be applied because they will make it more difficult for the physician to remove the applied substance and treat the wound.

As stated earlier, minor burns usually repair themselves with or without treatment. If the epidermal area has been damaged and the underlying tissue is exposed, the wound can be covered with a nonadherent burn dressing. This should be changed approximately every forty-eight hours. It is important that a nonadherent type dressing be used and that the individual does not pull off the regenerating skin when removing it. If the bandage sticks to the wound, the dressing should be soaked in warm water or saline solution and removed slowly. This is necessary because skin regenerates itself from the inside out, and from one edge of the wound to the other. Lack of care is removing any kind of wound dressing can result in pulling off the granulation tissue that is responsible for healing.

Burn Therapy

The two major types of therapeutic agents used in treating a wound are the antimicrobial agents and the local anesthetics. Since burn injuries that break the skin remove the body's barrier to microorganisms, infection can be a problem. Immediately after a thermal injury, the wound will be sterile because the organisms have been killed in the process. However, within hours, microorganisms can contaminate the wound surface and invade the hair follicles and sweat glands. The microorganisms rapidly proliferate due to the excellent nutrition provided by the necrotic burned tissue and serum. Staphylococci are always present in the environment both on the skin of the burned individual and on whoever is trying to treat it. Thus, staphylococcus is the most common organism found in the first several days following a burn injury. Other bacteria found in burn wounds are the beta-hemolytic streptococci, *Proteus vulgaris*, *Clostridium tetani*, *E. coli*, and klebsiella. The most dangerous invasive organism is another gram-negative bacterium, pseudomonas. It can enter the wound within hours to days after the injury occurs, and can lead to systemic complications.

Topical antimicrobial agents were discussed in detail in an earlier article. To quickly review, nonantibiotic antimicrobials are generally considered to be ineffective for actually **treating** a skin infection. The quaternary ammonium compounds such as benzalkonium chloride and hexylresorcinol have shown some evidence of effectiveness as skin wound cleansers that assist in removing foreign material from superficial wounds. The mercurial derivatives such as merbromin (Mercurochrome®) and thimerosal (Merthiolate®) have not been proven effective on open skin wounds. The old standby, tincture of iodine, is considered to be too irritating on broken skin and can actually delay wound healing.

The tetracycline derivatives, bacitracin, polymyxin, and neomycin are all considered to be safe and effective antibiotics for OTC topical use. Since both gram-positive and gram-negative organisms can be involved in a burn wound, it is recommended that a combination of polymyxin-bacitracin, or polymyxin-bacitracin-neomycin be used. These combinations will provide a wider spectrum of activity.

(Continued on page 22)

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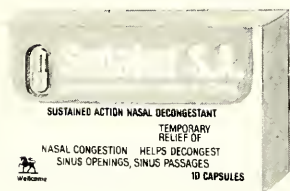
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There is also some controversy as to whether water soluble creams or occlusive ointments should be used in treating burn wounds. Most authorities prefer the occlusive ointments, after whatever other necessary treatment is complete. The petrolatum-based products can provide their own protective barrier against invasion of additional organisms, and may actually help the movement of granulation cells in their regeneration and healing functions.

Local anesthetics are considered to be safe and effective for treatment of pain associated with burn wounds on both unbroken and broken skin. Their effectiveness depends on the physical form of the local anesthetic and the condition of the skin itself. After penetrating the outer epidermal layer, they interrupt the conduction of nerve impulses through that area of the skin. The mechanism is thought to be due to their preventing the entrance of sodium ions into the nerve axons thus interfering with the transmission of impulses. Toxicity from the local anesthetics may be a problem. The FDA panel found this is rare from topical use for minor burns because the short term use limits the probability of systemic build-up of these agents.

There is a lack of evidence that any one agent listed in Table 2 is safer or more effective than any other. There is no doubt that local anesthetics are effective in relieving pain or broken skin and mucous membranes. Therefore, the lower strength products are preferred for that type of injury. There is less evidence that the local anesthetics are effective on burns of unbroken skin. The panel, therefore, suggested that the higher strength commercially available products be recommended for those types of burns. Table 2 lists the local anesthetics the FDA panel reviewed and ruled to be safe and effective for OTC use, along with their recommended strengths.

Since one of the primary goals of burn therapy is to control pain, aspirin or acetaminophen may be used. While the peripheral pain response to the burn can be successfully treated with local anesthetics, aspirin or acetaminophen can effectively relieve the systemic or central pain response.

TABLE 2**Representative Commercially Available Safe and Effective OTC Topical Local Anesthetics**

Agent	Recommended Strength	Examples
Benzocaine	5 to 20%	Americaine Dermoplast Foille Rhulicaine Solarcaine Unguentine
Butamben	1 to 10%	Butesin
Dibucaine	0.25% to 2%	Nupercainal
Dimethisoquin	0.5%	Quotane
Lidocaine	1 to 5%	Unguentine Plus Xylocaine
Pramoxine	1%	Tronothane
Tetracaine	0.5% to 1%	Pontocaine

Sunburn

Even though a large percentage of the Caucasian American public believes that a dark tan is both healthy and beautiful, it is generally held that overexposure to sunlight damages the skin and can lead to skin lesions. In fact, there is evidence that cumulative sunburn can eventually lead to skin cancer.

The majority of sunburns are of the mild, first degree variety. The cause is the ultraviolet radiation emitted by the sun. The basic measurement of sunlight is the nanometer (nm) which is equal to 10^{-9} meter. Sunlight radiation includes wavelengths from 200 to 1850 nm, but only the lower levels (ultraviolet light) burn or tan the skin. Basically, ultraviolet light is in the range of 200 to 400 nm and represents the wavelengths which are not visible up to the violet end of the color spectrum.

Ultraviolet Light

Ultraviolet light is further subdivided into UVA, UV-B and UV-C. **UVA** consists of the wavelengths between 320 and 400 nm. It is also called black light. It penetrates the epidermis to the greatest extent and tans more than it burns. However, it is more likely to cause burning if the individual has applied or taken a photosensitivity-producing drug or chemical.

The wavelengths of 290 to 320 nm are called **UV-B**. They are also called the sunburn radiation because, even though they both tan and burn, they are the worst for causing sunburn. Most of the UV-B emitted from the sun is filtered out by the atmosphere with only approximately 0.2% of the sun's rays reaching the skin's surface. However, 95% of that can be absorbed by the skin.

Ultraviolet C makes up the wavelengths of 200 to 290 nm. This is also called germicidal radiation because it can kill bacteria. Nearly all of the ultraviolet C emitted by the sun is filtered out by the ozone layer of the atmosphere and the skin's dead cell layer of the stratum corneum. UV-C is the type that is produced by artificial lighting used in food processing, drug manufacturing, and similar industries to maintain a "sterile" atmosphere. UV-C does not tan, but it can burn.

How Does Sunburn Occur?

When ultraviolet light penetrates the skin, it bleaches and oxidizes melanin (skin pigment). This leads to an immediate erythema (redness) within twenty minutes, which can barely be seen and rapidly disappears. True sunburn erythema begins two to eight hours later. The more melanin contained in the skin, the less sunburn erythema that occurs. Skin tanning occurs because the melanin producing cells (melanocytes) in the germinating layer produce more melanin, and the UV light oxidizes the melanin already present. Therefore, tanning is a normal reaction by the skin to protect itself against further damage. The ability to obtain a "good" tan and the "deepness" of tan are controlled, to the greatest degree, by the amount of melanin the person produces. This is determined genetically, not by a commercial "tanning" agent.

If the individual is overexposed and has insufficient melanin-producing capability, extreme redness, blistering, and pain can occur. It is estimated that the delayed erythema appears in 2 to 8 hours after exposure, peaks in 14 to 20 hours, and lasts for 24 to 72 hours.

Sunburn-sensitive individuals should avoid excessive exposure to the sun from 10 A.M. to 12 noon when its burning potential is greatest. Also the danger of sunburn increases

(Continued on page 24)

COUNSELING PATIENTS

the closer one is to the equator. Therefore, individuals living in the sunbelt area of the United States are more susceptible to severe sunburn than those living in the north.

Most sunburn is caused by UV-B, but it can also result from excessive UV-C generated from sunlamps or by UV-A in the presence of a photosensitizing agent. Another interesting point is that UV-B is not screened out by a thin cloud layer, but is partially absorbed by smoke and smog. It is totally blocked out by glass. Infrared light causes the warmth and heat from the sun, so UV-B can cause sunburn in the winter just as it can in the summer.

Treatment of Sunburn

Treatment of mild sunburn is more a matter of opinion than fact. Since the burn is self-healing, therapy should certainly be less noxious than the condition. Most experts agree that applying cool water or Burrow's solution for 15 to 20 minutes three to six times a day is considered good therapy. There is a growing feeling that administration of prostaglandin inhibitors such as aspirin may be beneficial. There is evidence that prostaglandins are involved in the immediate redness that leads to the delayed erythema. Prostaglandin inhibitors may prevent this early redness and thus lessen the overall severity of the burn. One study showed that indomethacin (Indocin®) solution, applied to the skin, lightened the color of the redness and lessened the overall severity of the burn. Since steroid application did not protect the skin, prostaglandin inhibition is felt to be the responsible mechanism. Many individuals subscribe to the use of two to three aspirin tablets orally before being exposed to sunlight and every 6 hours afterwards.

The use of an emollient cream or lotion following exposure to soothe and relieve the dryness of the sunburn may be helpful. A local anesthetic will be effective in any form, but sprays might be better since they are cooling due to both the propellant and the evaporation of the solution. On the other hand, the emollient vehicle in creams, lotions and ointments may also be beneficial.

For severe sunburn, physician treatment is necessary. It is far easier to abort severe

inflammation than it is to treat a reaction after it occurs. One form of therapy is corticosteroid dose packs or 40 to 60 mg of prednisone daily for three days. Both of these are often effective in aborting the complications of severe sunburn. The other treatments of extensive sunburn are the same as those mentioned for the mild forms. However, more potent analgesics may be needed.

The Dangers of Excessive Sunburn

The scientific community believes that there are two major dangers resulting from excessive, prolonged exposure to ultraviolet light. The first is a premature aging of the skin in susceptible individuals. This is caused by the dissolution of the skin's elastic fibers by ultraviolet light and it is a totally different type of tissue aging than that resulting from growing old. Persons susceptible to this type of skin damage will suffer from excessive drying, thinning, and wrinkling of the skin.

The second and more morbid problem is skin cancer, again in susceptible individuals. The FDA estimates that approximately one out of every two hundred and fifty Americans (1 million per year) will contract cancer. More than half of these patients will suffer from skin cancer associated with excessive exposure to ultraviolet light. Actually, recreational sunbathing contributes very little to this incidence. The major cause is occupational. Farmers, construction workers, sailors, and other individuals who are constantly exposed to sunlight have a far greater incidence of skin cancer than others. Those living or working in southern latitudes of the United States have a greater risk for skin cancer than those living in the north.

Another contributory factor for skin cancer is age. It is rare for a person under 45 to contract skin cancer with the highest percentage of those affected being 65 and older.

Males are more susceptible to skin cancer than females, but this is considered to be due to their occupational roles rather than any innate difference between the two sexes.

Race and ancestry is another significant factor determining whether or not one is susceptible to skin cancer. It rarely occurs in Blacks. Those naturally darker skinned Caucasians who have more melanin (i.e., those of Mediterranean, Middle East descent)

are rarely affected. Those of Scandinavian, Northern European, and Celtic ancestry with lighter skin, blue-green eyes, and blond hair are most highly susceptible to the condition.

Like all cancers, those which affect the skin are marked by uncontrolled cell growth that can spread (metastasize) to other body tissues or organs. Fortunately, only a small percentage of skin cancer metastasize (i.e., malignant melanoma). But when this does occur, it is invariably fatal.

Skin cancers can be treated by removing the lesion surgically, by freezing the tissue, or treating it with x-rays. There are several active chemotherapeutic agents (e.g., fluorouracil) that can be applied directly to the tumor. Most often a combination of methods is used. Fortunately, the skin is constantly replacing itself. If the individual with non-metastasizing skin cancer avoids excessive exposure to sunlight, after several months, or possibly longer, the diseased tissue will slough off and healthy epidermal cells will replace it.

Sunscreens Agents

The scientific community feels that the liberal use of sunscreens will reduce the severity of burns and protect susceptible individuals from premature aging and/or skin cancer. Sunscreens are chemicals that either physically or chemically block the entrance of UV-A and UV-B into the dermis. There are also some physical barrier sunscreens such as titanium dioxide and zinc oxide. Those that reflect or scatter UV light between wavelengths of 290 and 777 nm are officially called sunscreens. While the manufacturers control the formulation of sunscreens, knowledge of the active ingredients and their concentrations is helpful in differentiating products.

The most widely used chemical sunscreens are aminobenzoic acid (PABA) and its esters, the benzophenones, cinnamates, salicylates, and anthranilates. They are listed in Table 3.

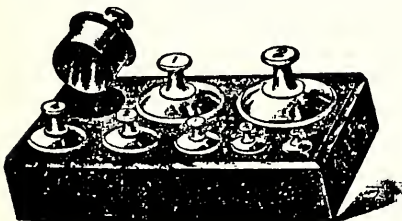


TABLE 3

Safe and Effective Sunscreen Agents

- *Aminobenzoic acid
 - Cinoxate
 - Diethanolamine p-methoxycinnamate
 - Digalloyl trioleate
 - Dioxybenzone
 - *Ethyl 4-bis (hydroxypropyl) aminobenzoate
 - 2-Ethylhexyl 2-cyano-3,3-diphenylacrylate
 - Ethylhexyl p-methoxycinnamate
 - 2-Ethylhexyl salicylate
 - *Glyceryl aminobenzoate
 - Homosalate
 - Lawson with dihydroxyacetone
 - *Methyl anthranilate
 - Oxybenzone
 - *Padimate A
 - *Padimate O
 - 2-Phenylbenzimidazole-5-sulfonic acid
 - **Red petrolatum
 - Sulisobenzene
 - **Titanium dioxide
 - Triethanolamine salicylate
-
- *PABA and its derivatives
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(Continued on page 26)

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Two factors to keep in mind when recommending sunscreens are the SPF (sun protection factor) and substantivity. SPF is the ratio of the amount of energy required to produce minimum sunburn through the product after application versus the amount needed to produce the same level of sunburn with no treatment. It is presented by the numbers that the manufacturers place on their products. For example, a sunscreen labeled with an SPF value of 2 indicates that most people can stay in the sun twice as long after applying that product before they will receive the same level of sunburn as if they had applied no product. Those with an SPF value of 2 to 4 are referred to as having minimal sun protection, 4 to 6 are moderate, 6 to 8 are extra, and those with an SPF value of 8 to 15 provide maximal sun protection. Those with an SPF value of greater than 15 provide ultra sun protection. This means that individuals applying these products can stay in the sun at least 15 times longer and be protected from sunburn than if they had applied no product at all. Table 4 lists recommended sunscreens depending on the patient's skin type and need. Once the commercially available product with the appropriate sun protective factor is selected, one can be reasonably assured that each manufacturer's product will be equally effective. The basic differences between the various agents include cosmetic scent, the vehicle used, and marketing techniques. There is some evidence that the vehicle will be the controlling factor in the product's substantivity.

Substantivity reflects the ability of the product to remain effective under the stress of prolonged exercise, sweating and swimming. It appears to be a function of both the sunscreen agent and the vehicle. Earlier studies showed that PABA in alcohol was the most substantive of all products, but more recent studies suggest PABA esters may be more substantive than the parent PABA and that cream-based vehicles may be more resistant to removal than those with an alcohol base. Combination products are likely to be more substantive than single ingredient products. Regardless of the claim for substantivity, individuals using sunscreens should be advised to apply them liberally before they become exposed to the sun, and

then re-apply them after excessive sweating or coming out of the swimming pool.

TABLE 4
Recommended Sunscreens

If the Individual	Recommended Protection	SPF Value
Rarely burns but tans profusely, or, burns minimally but always tans	Minimal	2 to 4
Burns moderately but tans gradually	Moderate	4 to 6
Burns easily but tans minimally	Extra	6 to 8
Burns easily but rarely tans	Maximal	8 to 15
Has history of skin cancer or photosensitivity reactions	Extra	greater than 15

Photosensitivity

Sunlight and ultraviolet radiation play useful roles in some forms of therapy. For example, methoxalan (a psoralen agent) plus ultraviolet radiation (PUVA therapy) can clear psoriasis in the majority of persons who can tolerate it. Sunlight and artificial ultraviolet light have been thought to be beneficial in many patients with acne. Ultraviolet light applied to newborns can prevent hyperbilirubinemia that will lead to kernicterus and brain damage if not treated.

However, ultraviolet light can cause problems in some individuals. Paramount among them are two types of photosensitivity: photoallergy and phototoxicity. While there are some similarities between them, there are also some major differences. The proposed mechanisms for each are presented in Figure 1.

Photoallergy, like any other allergic reaction, requires prior sensitization to the causative drug and ultraviolet light before a severe reaction occurs. Each time it recurs, however, the reaction is worse. Photoallergy

FIGURE 1.
Proposed Mechanisms
For Photosensitivity Reactions

PHOTOALLERGY

↓
 Drug + UV Light
 ↓
 Photoaltered Drug
 (hapten)
 ↓
 Skin Protein
 ↓
 Complete Antigen
 ↓
 Re-exposure to UV Light
 ↓
 Photosensitivity Reaction

PHOTOTOXICITY

↓
 Drug + UV Light
 ↓
 Photo-excited Drug
 ↓
 Release of absorbed Energy into Skin
 ↓
 Potentiated Sunburn Response

is far less frequent than phototoxicity and looks more like a skin rash than sunburn. Additionally, it extends to unexposed parts of the skin. If it is caused by a drug, it can be especially severe because any subsequent exposure to it or a chemically similar agent results in a flareup.

Phototoxicity takes on the appearance of exaggerated sunburn rather than a rash. It generally has distinct boundaries confined to the skin area that has been exposed to the ultraviolet light. This also differentiates it from contact dermatitis. The same drug can cause both photoallergic and phototoxic reactions. The lay public generally refers to this condition as sun "poisoning." If a patient has this type of reaction but insists that he has not been in the sun, it could be the artificial UV light from fluorescent bulbs.

The use of sunlamps in "tanning" booths can be dangerous. As stated earlier, a considerable amount of burning and photosensitizing rays are absorbed by the atmosphere surrounding the earth, but it is a

totally different matter when a person is standing 6 to 12 inches from the source of the ultraviolet radiation.

Tanning booths have become one of the latest fads in America with thousands now operating across the country. Those that are constructed properly with an automatic timer are reasonably safe if the individual follows directions and wears protective goggles. However, FDA reports that over 7,000 patients were treated in emergency rooms for sunlamp injuries in 1979, long before the proliferation of tanning booths. The agency is now considering regulation of such enterprises. Those individuals with a history of excessive sunburn or photosensitivity reactions should certainly not be using tanning booths.

There is a considerable number of agents that cause photosensitivity reactions with antibacterial agents contained in soaps, cosmetics, psoralen-containing plants, and coal tar derivatives. There is a considerable number of drugs that are also photosensitizing. The increase in these reactions is of enough concern that FDA published a warning in its July, 1980 *FDA Drug Bulletin*. Drugs from that list are shown in Table 5.

Advice to Patients With Known Photosensitivity

Needless to say, most individuals can sunbathe for moderate or even excessive periods without any undue long-term ill effects. Those individuals who have a history of photosensitivity reactions to excessive exposure to sunlight should be advised to: 1) discontinue use of all cosmetics, 2) use a bland soap such as Ivory™ or Dove™ rather than the highly perfumed "antibacterial" soaps, 3) discontinue use of OTC drugs and discuss their use with a physician, 4) wear protective clothing, 5) avoid prolonged exposure to direct sunlight and artificial ultraviolet light, 6) use a sunscreen agent, and 7) consider taking aspirin 1 to 2 hours prior to going out in the sun and every six hours after exposure. If excessive sunburn does occur, Burrow's solution, soaps, and emollient creams may be helpful in alleviating dryness. Systemic antihistamines can be used for itching, and topical steroids for mild inflammation. The severity of the condition should be the determinate factor in whether medical care is necessary.

(continued on page 28)

COUNSELING PATIENTS

TABLE 5

Selected Photosensitizing Drugs

Antihistamines (Benadryl [®] , Periacin [®] , etc.)
Estrogens (including oral contraceptives)
Griseofulvin (Fulvicin [®] , Grisactin [®] , etc.)
Haloperidol (Haldol [®])
Nalidixic acid (NegGram [®])
Phenothiazines (Mellaril [®] , Thorazine [®] , Trilafon [®] , etc.)
Sulfonamides (Gantrisin [®] , Gantanol [®] , Septra [®] /Bactrim [®] etc.)
Sulfonylureas (Diabinese [®] , Orinase [®] , Tolinase [®] , etc.)
Tetracyclines (Declomycin [®] , Sumycin [®] , Vibramycin [®] , etc.)
Thiazide-like diuretics (HydroDIURIL [®] , Lasix [®] , etc.)
Tretinoin (Retin-A [®]), Isotretinoin (Accutane [®])
Tricyclic antidepressants (Elavil [®] , Sinequan [®] , Tofranil [®] , etc.)

Sulfonamides, the thiazide diuretics, and the sulfonylureas are chemically similar to PABA. Individuals sensitive to these drugs should not use a sunscreen containing PABA or its derivatives because of the chance for cross sensitivity. In these instances, sunscreens containing dioxybenzone, oxybenzone, or sulisobenzene should be considered. A sunscreen opaque sunblocking agent that reflects or scatters all ultraviolet light and prevents both sunburn and suntan is a better alternative. However, it is often not cosmetically acceptable.

Common sense should be used in giving patients advice to assure that they do not misunderstand or overreact and fear going outdoors. Very few individuals will experience photosensitivity reactions. When these do occur, however, such reactions are both physically painful and psychologically traumatic.

Test on page 31

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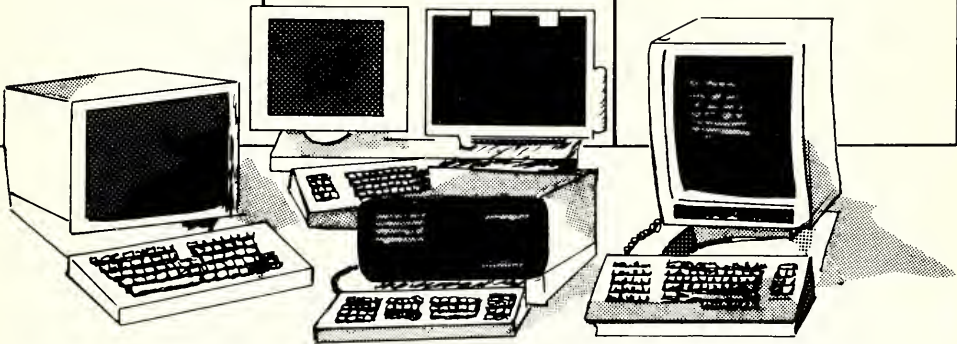
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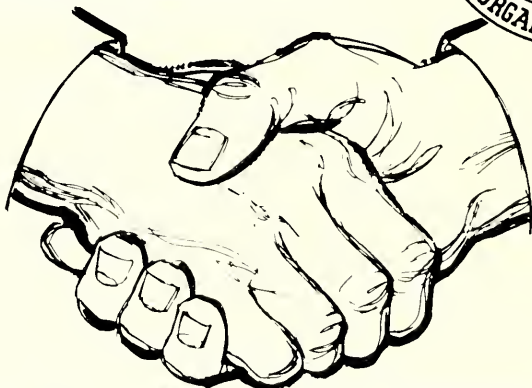


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CORRESPONDENCE COURSE QUIZ**Sunburn and Photosensitivity**

1. Which of the following has been ruled to be the most effective skin wound cleanser?
 - a. benzalkonium chloride
 - b. iodine tincture
 - c. merbromin
 - d. thimerosal
2. Which of the following forms of ultra-violet light is most likely to cause sunburn?
 - a. UV A
 - b. UV B
 - c. UV C
3. The most important factor that determines whether or not a person will tan deeply is:
 - a. the brand of tanning cream used
 - b. the combination of sunscreens in the product used
 - c. the amount of melanin produced in the individual's skin
 - d. the degree of substantivity of the product used
4. The damage that burn injury causes to skin protein is best described as:
 - a. coagulation
 - b. conjugation
 - c. polymerization
 - d. reduction
5. Nonadherent dressings are best for application to regenerating skin wounds because they:
 - a. retard bacterial invasion
 - b. prevent pulling off granulation tissue
 - c. hold the burn remedy on the skin
 - d. keep the area warm
6. The type of burn that is most appropriate for self-medication is:
 - a. first degree
 - b. second degree
 - c. third degree
7. In regard to recommending burn remedies, which of the following statements has the greatest proof of being true?
 - a. Water soluble creams are better than occlusive ointments.
 - b. Polymyxin-bacitracin combinations are better than either agent alone.
 - c. Benzocaine is more effective than the other available OTC local anesthetics.
 - d. In a given strength, local anesthetics are equally effective for treating burn wounds of broken and unbroken skin.
8. Which of the following is the best sun-screen agent to recommend to a person known to be hypersensitive to sulfonamides:
 - a. aminobenzoic acid
 - b. glyceryl aminobenzoate
 - c. oxybenzone
 - d. padimate O
9. All of the following statements are true **EXCEPT**:
 - a. Immediately after a thermal injury, the wound will be sterile.
 - b. the invasive organism most likely to lead to systemic complications after penetration of burn wounds is pseudomonas.
 - c. the immediate goal of treating first degree burns of unbroken skin is to control pain.
 - d. The most common organisms found following burn injury are beta-hemolytic streptococci.
10. The application of cold to a burn provides all of the following **EXCEPT**:
 - a. antibacterial
 - b. local anesthetic
 - c. pain relief
 - d. vasoconstriction
11. The recommended product for an individual who sunburns moderately but tans gradually is one with an SPF value of:
 - a. 2 to 4
 - b. 4 to 6
 - c. 6 to 8
 - d. 8 to 15
12. All of the following statements about ultraviolet light A are true **EXCEPT**:
 - a. It penetrates epidermis to a greater extent than the other types of ultraviolet light.
 - b. It tans more than it burns, but it is more likely to burn if the individual has taken a photosensitizing drug.
 - c. It is germicidal and is used in manufacturing plants to maintain as sterile an atmosphere as possible.
 - d. It represents the longest wavelength of ultraviolet light and is the closest to the visible spectrum of colors.

(Continued on page 32)

TEST

13. Which of the following have been reported to be photosensitizing drugs:
- antihistamines, phenothiazines and tricyclic antidepressants
 - estrogens, sulfonamides and tetracyclines
 - sulfonylureas and thiazide diuretics
 - all of the above
14. After the burn has occurred and destroyed tissue, the type that does not respond to touch, and causes the **least** amount of pain is:
- first degree
 - second degree
 - third degree
15. As compared to photoallergy, phototoxicity:

- is less common
- looks more like an exaggerated sunburn
- requires more prior sensitization incidents
- looks more like a rash

This Continuing Education article is approved for one (1) hour C.E. credit. A score of 90% is required for credit and the test may be repeated once. To have your test graded, please mail the answers to C.E. Test, NCPHA, PO Box 151, Chapel Hill, NC 27514. Record of your tests will be kept for you at the NCPHA office and verification supplied on request. This is a member service for which there is no charge.

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FROM OUR READERS

To The Editor

Carolina Journal of Pharmacy

Slightly over a century ago the pioneers of our North Carolina Pharmacy profession saw a need to become identified as an independent profession, not as an off-shoot or not subservient to any other profession. The result of these strong feelings led to the birth of the North Carolina Pharmaceutical Association which fought for and won the creation of a North Carolina Board of Pharmacy and self regulation. This form of self regulation has served our profession and protected the public well for these past 103 years.

As a past president and a member of this Association for nearly three decades and also a member of the North Carolina Board of Pharmacy, I am writing with great concern for our profession's continued right to police itself.

A proposal presented to the short session of the General Assembly, unless changed, would effectively eliminate the Board of Pharmacy from its role in disciplinary proceedings against pharmacists and would bring to an end 103 years of self regulation by our profession. This proposal to Recodify the Administrative Procedure Act was presented as a review of agency rules along with a change in appeals procedure and was described as an effort to separate powers within state agencies. While this sounds pretty bland, perhaps even beneficial, the overall effect would be far reaching as far as pharmacists and the Board of Pharmacy are concerned.

I have heard several pharmacists and friends of pharmacy say: (1) "We should not worry since this proposal will have little effect on pharmacy," or (2) "Like it or not it is going to pass since there are so many politically powerful people in favor of it" or (3) "There is nothing we can do about it." I think all three of these statements are absolutely false.

Just how will this bill effect pharmacy? In addition to inserting another unnecessary level of bureaucracy in state government, this proposal will prevent our Board from hearing any contested disciplinary proceedings. It would also prohibit our Board from enforcing any regulations drawn up by the Board of Pharmacy. It calls for the appointment of a

number of administrative judges as well as additional Superior Court judges to hear cases involving licensed professionals, such as pharmacists, bypassing the boards completely. This would have the effect of depriving a professional person, in our case a pharmacist, from being judged by his peers and by those with experience and expertise in their field. The overall result of this proposal would be to turn all licensed professionals over to the lawyers for discipline within that profession. This proposal would substantially increase the cost a pharmacist would have to spend to defend him/herself in a disciplinary proceedings and would increase the legal fees the Board would have to spend by at least triple. These increased legal fees by the Board would have to come from increased license and permit fees which you will have to pay. (It is interesting to note that this proposal would *not* apply to the legal profession who would still be permitted to discipline their own cases.)

Imagine practicing pharmacy under a system of regulation by Raleigh Bureaucrats. Suppose one day an inspector from Medicaid came into your pharmacy and noticed a half full bottle of a sulfa drug that had expired three months ago. He pointed out that you had filled prescriptions for this same drug within the past month, and you are unable to produce the bottle from which those prescriptions were filled. You are charged with a violation and informed of a hearing date before a judge. You are advised to seek counsel. You present your case, but have no tangible proof that you in fact had an indate drug when the prescriptions were filled. Your pharmacy is removed from participation in the Medicaid program, your license to practice pharmacy is suspended for six months, you are required to pay back to Medicaid a fee which they feel will cover all other such instances, and at no time have you had the opportunity to stand before your peers and present your case. Your legal costs in unsuccessfully defending yourself exceed \$1,500. And this proposal will not affect pharmacists!

I hope all pharmacists who read this will show it to their colleagues and other licensed professionals and take the time to talk with their State Senator(s) or Representative(s) regarding this important issue. Pharmacists

(continued on page 36)

CONGRATULATIONS TO



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Ed Vaughn and Dough Mitchell on their new store, Vaughn's Independent Pharmacy #2 in Chapel Hill. It was our pleasure to help design and supply fixtures for this new store.

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FROM OUR READERS

should retain the right to be judged by their peers and not turn our profession over to the lawyers by default. The very need that led to the establishment of the North Carolina Pharmaceutical Association is at stake. Don't be silent on this issue . . . contact your Senator or Representative and other pharmacists both before and after the election.

W. Whitaker Moose
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DUKE POISON CONTROL CENTER

The Duke Poison Control Center has received a two-year grant of \$180,000 to develop the Center into a regional poison control center for North Carolina. The toll-free telephone number for the Center is 1-800-672-1697. Please post this number beside your telephone along with the number for your local poison control center.

NEW OFFICERS FOR MECKLENBURG SOCIETY

The Mecklenburg Pharmaceutical Society announced the 1984 Officers:

President—Debra Smith
First Vice President—Tom Dagenhart
Second Vice President—Robin Cooke
Secretary—Phil Rea
Treasurer—Elana Marsh

The Mecklenburg Pharmaceutical Society meets the second Wednesday of each month at the Western Sizzler at the corner of South Boulevard and Tyvola.

MIRACLE DRUG

I Turned, I Pushed, I Pulled the top
I gave the lid a sounding Rap
At last my grandchild helped me out
By taking off the Child-proof cap

(From a customer of Calvin Floyd)

REPORT OF THE NCPHA COMMITTEE ON STATE LEGISLATION

Presented at the 104th Annual Convention

April 8, 9 & 10, Chapel Hill

During 1983 the legislative committee began its work by reviewing the rules and regulations proposed for hospital and nursing home practice. The overall objective of the committee was to see that all parties affected i.e. retail, hospital, etc. were treated fairly.

One of our members, Paul Bisette, made a joint presentation with William T. Sawyer, president elect for the North Carolina Society of Pharmacists before the Board. Later during the year many of these joint venture regulations were adopted.

One proposal that was not adopted was a proposed regulation to allow Health Department nurses to dispense certain medications without pharmacist supervision. A compromise was reached with the affected parties and their positions presented to the Board of Pharmacy. However, at a later time the Board was informed via its public member that it did not have the statutory authority to act on the matter so no action was taken.

An increase in pharmacy dispensing fee was proposed and acted on favorably by the committee and actions will be taken during this session of the legislature (which is a short session and can only consider financial matters unless a 2/3 vote is taken to suspend the rules) by our lobbyist Mr. Ed Nye.

One topic which was discussed at length during our first meeting was the possibility of proposing a Third Party Bill during the 1985 session of the legislature.

The consensus of the committee upon watching the performance of those Third Party Bills adopted by other states is that essentially things got worse. Another thorn in the Third Party Bill argument was a court ruling which in affect allowed a grandfather clause so that only new plans would have to comply and the old plans were exempted. One of the states which we monitored has had no new plans sign up, subsequently the bill was not worth the paper it was written upon as it essentially changed nothing.

The committee proposes that Third Party legislation be closely monitored in other states and once some effective form is found that the association then pursue that course.

The committee took favorable action on a request by the N. C. Public Health Association, Inc. that they be supported in their attempt to retain Boards of Health in those counties with populations over 325,000. It was the consensus of the committee that as the make-up of a Board of Health comprises a physician, pharmacist, dentist, etc. that this monitoring body does safeguard the public health and does involve a member of our profession politically at grass root level that we act favorably on the Public Health Association request and report the same to the executive committee of the N.C. State Pharmacists Association. Committee member Rex Paramour was most helpful in this matter as he has been a member of the Board for many years in Nash County.

The committee was also represented in meetings held with Barbara Matula of the N.C. Department of Human Resources in which our mutual concerns were discussed and the blocks laid for future communications. Our thanks for their efforts in putting this meeting together go to Paul Bisette and Rex Paramour.

N.C. Pharm Pac has communicated actively with the committee on all topics and although no new legislation could be adopted this year we feel confident that the dialogues with the various groups affecting our profession will form a foundation for any legislative activities the 1985 committee may wish to pursue.

At a recent meeting involving members of the committee, the N.C. Chain Drug Committee and the N.C. Merchants Association possible taxation problems seemed to be hovering on the horizon and our lobbyist will keep us informed as to what is brewing in the pot.

Jimmy S. Jackson, Chairman—Raleigh
Paul B. Bisette, Jr.—Wilson
Thomas R. Burgiss—Sparta
Truman Hudson—Gastonia
Rex A. Paramore—Nashville
Henry L. Smith—Carrboro
A. Rowland Strickland—Stantonsburg

NORTHEASTERN CAROLINA PHARMACEUTICAL SOCIETY

The Northeastern Carolina Pharmaceutical Society held its regular meeting Wednesday, August 8th at Cobb's Restaurant in Williamston, NC. Approximately fifty members were present for dinner, the business meeting and a presentation on "Ethics in Pharmacy."

After the Social hour, several items were discussed at the business meeting. Briefly, these included: A report from the Treasurer and report of the total number of members paid to date. A date of Dec. 2nd was agreed on to have the annual Christmas Party; and Bob Bowers and Logan Womble were appointed to investigate suitable sites for the Christmas Party.

An informative and interesting Presentation on "Ethics in Pharmacy" was provided by Dr. Frances Quinn, Ph.D. from Tulsa, Oklahoma. In addition to being a nationally recognized authority on Ethnics, Dr. Quinn is an Industrial Relations Consultant, Mediator and Arbitrator holding positions with the Federal Mediation and Conciliation Service, National Mediation Board, American Arbitration Association and others. He is also editor of "The Ethical Aftermath Series" and numerous other books and publications. Among Dr. Quinn's many honors and awards are: Who's Who in the World 1982, Who's Who in Finance and Industry 1980, Outstanding and Dedicated Service Awards for Providing Continuing Education to Pharmacists, MSD 1977 and 1982. Dr. Quinn's program was provided compliments of Allen Hayes, sales representative for MSD and MSD. Dr. Quinn pointed out that Pharmacists are now the most trusted professions according to the latest Gallop Poll. He made us aware that we have an important Professional trusted role in Society and will have to work hard to maintain that position.

William H. Brown
Secretary Treasurer
Northeastern Carolina
Pharmaceutical Society

QS/1 INTRODUCES NEW PHARMACY COMPUTER SYSTEM ON IBM PC

Smith Data Processing (SDP), developers of QS/1 Data Systems, has developed an additional microcomputer system for the pharmacy according to SDP President Glenn Hammett.

The system, based on the popular IBM® PC, utilizes the same software as the QS/1 systems which run on the IBM Series/1 minicomputer and Seiko 8600 microcomputer. The IBM PC system comes with a hard disk and has several printer options.

"We recognize the fact that what is economical for a pharmacy processing 300 prescriptions per day may be overkill for a drug store processing less than 100 scripts per day," says Hammett.

"We've developed the QS/1 pharmacy system for the IBM PC system to bring the smaller neighborhood pharmacy the same benefits as large stores," he points out. "With the IBM PC, they get the same proven QS/1 software and a very dependable small business computer that easily handles the needs of lower volume stores. And the PC user is backed by the same quality service of our nationwide network.

"This addition to our product line makes Smith Data Processing's QS/1 family of computer systems unique in the industry. No other pharmacy system supplier has three completely different sets of hardware operating the same software. This 1-2-3 punch gives every pharmacist the opportunity to have a quality system without worrying about what he'll do if he outgrows it. With QS/1, he can just upgrade to the next system easily without loss of time or money. We can also tie all three systems into a network if desired. No one else can do that either," Hammett concluded.

The IBM PC system will be marketed and distributed nationally. Cost for the entry level system is \$12,759.

SDP developed QS/1 Data System for the Series/1 minicomputer in 1977. The company introduced the Seiko 8600 system in 1983 and now has over 800 systems installed in 47 states and Canada.

DEATHS

A. G. Pelt, Jr.

A. G. Pelt, Jr., Goldsboro, died Saturday, August 11, 1984 at Wayne Memorial Hospital. He was 66 years old. Pelt was a former co-owner of Cash Drug Company and had been associated with Goldsboro Drug for 15 years. He was a life-long resident of Goldsboro and was licensed as a pharmacist in 1962.

William Luther Johnson, Sr.

William L. Johnson, Sr., Gibson, died August 24, 1983, at Morgan Center. Gibson was 95 years old. Johnson was licensed by examination in North Carolina in 1910 and worked with Parke-Davis as a branch manager and was associated with Legion Drug and Fox Drug in Rockingham and with Warner Drug in Ellerbe. He was recognized by the NCPHA for 50 years as a pharmacist in 1960.

Steve Andrew Pappas

Steve A. Pappas, Charlotte, died Thursday, July 5, 1984, after a lengthy illness. Pappas, a native of Charlotte, was a 1949 graduate of the UNC School of Pharmacy and was a co-owner of Akers Pharmacy in Gastonia, Southern Drug and Hawthorne Drug of Charlotte. Pappas was 60 years old.

STAFF PHARMACISTS NEEDED: The Memorial Hsp., a 500-bed community hospital, is seeking highly motivated staff pharmacists to help implement new mobile decentralized unit dose ADN I.V. Admixture Programs. Following the implementation of these services, the department will begin development of a clinical program. Get in on the ground floor of a growing department. Located in south-central Virginia with convenient access to mountains, lakes, and larger metropolitan areas. Please call or send resume to The Memorial Hospital Personnel Dept., 142 S. Main St., Danville, VA 24541.

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William H. Taylor

William H. (Bill) Taylor, Yadkinville, died August 9 at NC Baptist Hospital. He was 47 years old. Taylor was married to the former Sue Sheek and they owned Sheek-Taylor Drugs in Yadkinville, managed by Mrs. Taylor. Mrs. Taylor was Operations Manager of R. J. Reynolds Coupon Redemption Center in Winston-Salem. He is survived by his wife and two daughters, Carla Betha and Billie Sue, all of the home.

T. Martin DeLozier

Martin DeLozier, Robbinsville, owner of DeLozier Drug Store, died August 3, 1984 at the age of 51. He was a 1958 graduate of the University of Tennessee School of Pharmacy and was licensed by reciprocity in North Carolina in 1958.

William Stephen Gibson

W. S. "Bill" Gibson, Goldsboro, died August 15, 1984 in Wayne Memorial Hospital after a short illness. Gibson, 75 years old, was a native of Red Springs and was the former owner of Gibson Drug Store. He was a graduate of the UNC School of Pharmacy and was licensed to practice in North Carolina in 1962. He was a past president of the Traveling Men's Auxiliary of the NCPHA, when he was associated with Bodeker Drug Company.

PHARMACEUTICAL RELIEF AND CONSULTATION: By the day(s), week(s) or month(s). For sale: Esper 732 Electronic Cash Register. Class A Torsion Balance recently rebuilt by J. A. King Co. Greensboro, (no weights). AES, Medical Blood pressure computer, not a coin-op., patient may use unassisted. Contact Leonard W. Matthews, III (919) 967-0333 or write 1608 Smith Level Rd., Chapel Hill, NC 27514.

SALESMEN AND SALESWOMEN WANTED: For pharmacy computer systems marketing. Contact: James Hall, Computascript, Systems Research and Development, P. O. Box 12221, Research Triangle Park, NC 27709. (919) 544-1730.

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PHARMACY FOR SALE: Only pharmacy in small N. C. town. Business good and growing. Excellent potential. Confidential please. Reply Box No. RB, NCPHA, P. O. Box 151, Chapel Hill, NC 27514.

CHIEF PHARMACIST WANTED: Duplin Co. Hsp. Seeking a full time pharmacist with exp. in hsp. pharmacy operations, including drug utilization, unit dose, patient profile, drug purchasing. Send resume with salary history to: Administrator, Duplin Gen. Hsp., P. O. Box 278, Kenansville, NC 28349.

PHARMACY DIRECTOR: Director of Pharmacy for medium sized North Carolina hospital. Only those applicants with 3-4 years hospital pharmacy exp. and a working knowledge of the unit dose system will be considered. Prior supervisory/management responsibilities a must. Applicants must be graduates of accredited school of pharmacy and registered with N. C. Pharmacy Board. Submit resume with salary history to: Vice President Human Resources, Union Memorial Hsp., Inc., P. O. Box 5003, Monroe, NC 28110. (704) 289-8713.

OCEAN ISLE BEACH HOUSE FOR RENT: First St. Ocean Isle Beach—5 bedrooms, 3 baths. Excellent View—Reasonable rates. Phone (919) 578-3207.

RETIRING PHARMACIST WITH EXTENSIVE BACKGROUND: In hospital, retail, nursing home and nursing home pharmacy, interested in part time or relief work in the Durham, Chapel Hill, or Raleigh area. Contact NCPHA, Box HLK, P. O. Box 151, Chapel Hill, NC 27514.

CLINICAL INSTRUCTOR IN PHARMACEUTICS: School of Pharmacy, University of North Carolina at Chapel Hill. The primary responsibility associated with this position is the supervision of an undergraduate laboratory in pharmaceuticals each semester. The appointee will also be expected to participate in one of the Division's current research projects. BS or higher degree, preferably in Pharmacy, is required. A resume and the names and addresses of at least 2 references should be sent to Dr. James Swarbrick, School of Pharmacy, Beard Hall 200-H, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27514. (919) 962-0092. The deadline for applications is November 1, 1984.

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HEALTH AND BEAUTY AID CHAIN OPENING: 4,000 Sq. Ft. store in Spring Hope, NC. Seeking Pharmacist to lease RX Department. Interested parties contact R. W. Lichauer, P. O. Box 2786, High Point, NC 27261. (919) 883-6131.

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The Compute-Rx system was developed by Preston Hale and Wayne Hague over a four-year period in their own pharmacies. The system has become so popular that it's now used in a growing number of community pharmacies, chain drug stores, and schools of pharmacy.

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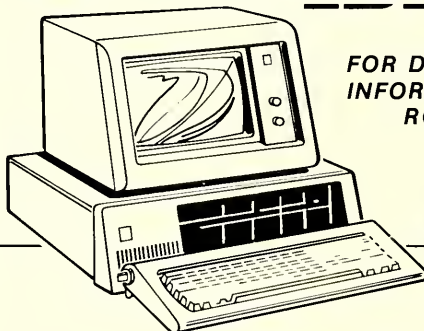


THE PHARMACY COMPUTER SYSTEM

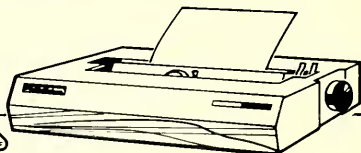


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THE CAROLINA JOURNAL of PHARMACY

SEPTEMBER 1984 VOLUME 64 NUMBER 9



Al Lockamy, Jr., Raleigh, left, receives his Syntex "Practitioner-Instructor of the Year" plaque, in recognition of his contribution to the educational experience of students on clinical rotation. Presenting the award, voted by the students, is Claude Paoloni, Director of AHEC and Continuing Education.

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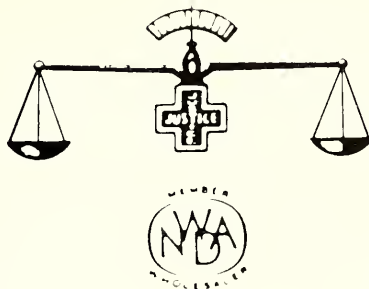
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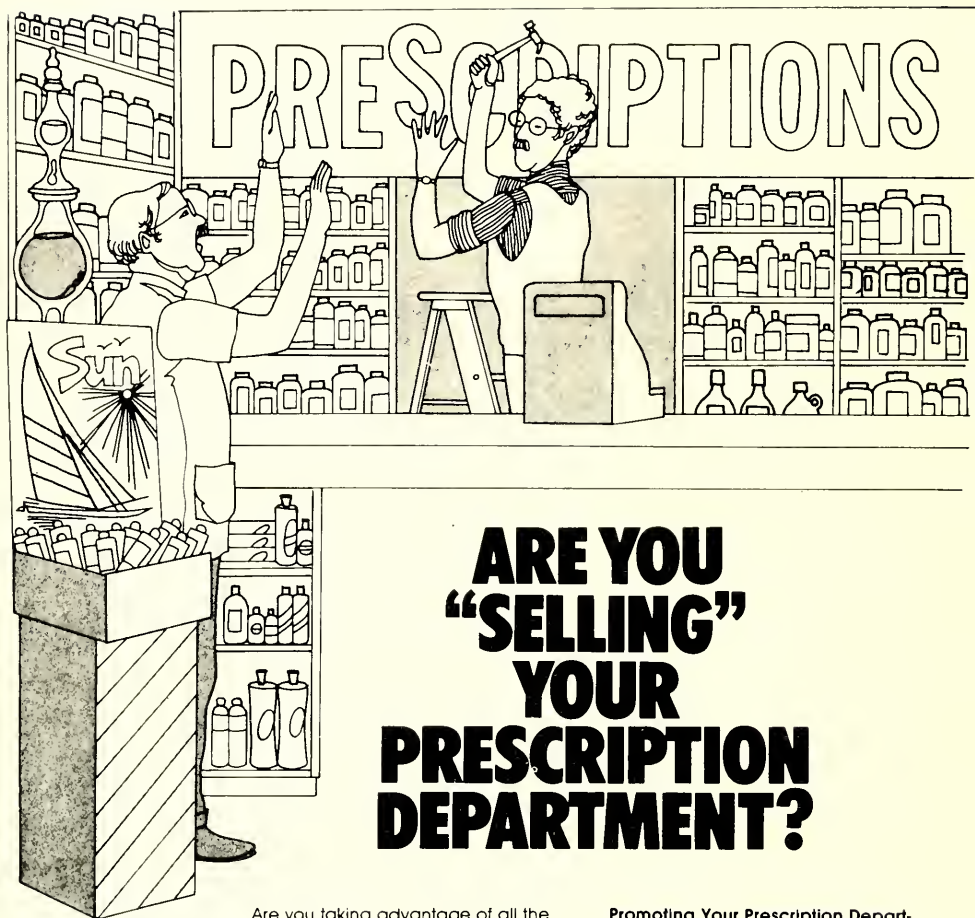
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REPORT OF THE CONSOLIDATED STUDENT LOAN FUND AND ENDOWMENT FUND COMMITTEE

Presented at the 104th Annual Convention
April 8, 9 & 10, 1984, Chapel Hill

CONSOLIDATED LOAN FUND

The Consolidated Loan Fund is the only regular source which can meet quickly the needs of pharmacy students for emergency financial aid. During calendar 1983 this fund provided \$40,600.00 in loans to 136 students. This represents over six percent of the approximately \$647,00.00 in documentable loans, grants and scholarships received by pharmacy students in this same period.

The financial report of this fund as well as a comparison table of fund activity for the years 1978 through 1983 are attached. Contributions to the fund in 1983 of \$14,238.76 are almost equal to 1982 contributions. Contributions in both of these years are considerably above those of past years with the single exception of approximately \$15,000.00. The impact of letters of solicitation from the Fund Chairman and the Association Presidents during 1982 seems to have extended into 1983. The total of monies loaned in 1983 was \$5,400.00 greater than in 1982, and the number of loans made in 1983 exceeded that of 1982 by 17.

At its meeting of February 26, 1984, the Committee adopted or reaffirmed the following policies.

1. The Executive Secretary of the Association will send a letter of appreciation from the Committee to Mr. George T. Cornwell for his many years of outstanding service on the Committee. Mr. Cornwell found it necessary to decline appointment to the Committee this year.
2. The Committee reaffirmed the position that loans will be made only to students of the School of Pharmacy of the University of North Carolina at Chapel Hill who are members of the Student Branch of the North Carolina Pharmaceutical Association.
3. For purposes of eligibility for loans from this fund, a pharmacy student must become a member of the Student Branch of the North Carolina Pharmaceutical Association during the several-week enrollment period which occurs at the

beginning of the fall semester each year. In highly unusual circumstances, and with the express approval of the Committee, loans may be made to students who establish membership at a date after the regular enrollment period.

4. The Executive Secretary of the Association was directed to take necessary action to ensure that all students of the School of Pharmacy be given the opportunity to become members of the Student Branch of the North Carolina Pharmaceutical Association during the regular enrollment period each year.
5. Unless recommended otherwise by the Executive Secretary of the Association in cases of extreme hardship, loans delinquent in repayment will be charged a penalty of one and one-half percent of the amount overdue per month of delinquency.
6. In those cases of loan repayment delinquency which in the opinion of the Executive Secretary of the Association are extreme, loan collection shall be turned over to an attorney or other collection agency and collection costs incurred shall be added to the total loan amount due.

Loans to students from the Consolidated Loan Fund bear no interest and experience with loan repayment is generally good. However, those few cases of delinquency which do occur place an unnecessary burden on the Association staff. Consequently, items 5 and 6 above have been incorporated into the loan policies for any loans made after the 1983-84 academic year.

The Chairman presented a resume of the financial aid being received by students of the School of Pharmacy during the 1983-84 academic year as well as a resume of the School's plans for implementation of the Joe Hollingsworth Memorial Scholarships.

A letter of solicitation on behalf of the Consolidated Loan Fund will be sent in March, 1984, to prospective donors by President Claytor and Chairman Wier.

(Continued on page 6)

CONSOLIDATED PHARMACY LOAN FUND

1983

Number of Loans Made	136
Total Value of Loans	\$ 40,600.00
Average Value of Loans	\$ 300.00
Value of Loans Outstanding	\$ 99,048.33
Contributions to Fund	\$ 14,238.76
Total Assets of Fund	\$128,962.03

ENDOWMENT FUND

The financial report of the endowment fund is attached.

The General Endowment Fund was increased through contributions and receipt of life membership dues by \$700.00 to a total of \$107,166.32. Interest received of \$7,535.59 was transferred to the General Fund to help in the cost of operations of the Association.

There were no expenses charged to the W. J. Smith Convention Speaker Fund in 1983. Interest received of \$239.81 and contributions of \$80.00 brought the total value of the fund to \$5,512.97.

After deduction of expenses of \$603.95 associated with the Ralph P. Rogers, Sr., Pharmacy Administration Award, which is presented to a student at the School of Pharmacy, the Ralph P. Rogers Fund was increased in value by interest received to a total value of \$14,932.07, an increase of about \$1,100.00.

Respectfully submitted,
Jack K. Wier, Ph.D.
Chairman

ENDOWMENT FUND

	<i>Balance</i> 1-1-83	<i>Balance</i> 12-31-83
General Endowment	\$106,416.32	
Interest Received		\$7,535.59
Interest Transferred to General Fund		7,535.59
Contributions		150.00
Life Membership		600.00
		\$107,166.32
Ralph P. Rogers Fund	\$13,835.97	
Interest		\$1,700.05
Expenses (Award & Dinner)		603.95
		\$ 14,932.07
W. J. Smith Convention Speaker Fund	\$ 5,139.16	
Interest		239.81
Contributions		80.00
		\$ 5,512.97

CONSOLIDATED PHARMACY LOAN FUND Comparison of Selected Activities for 1978 through 1983

	1978	1979	1980	1981	1982	1983
Number of Loans Made	78	91	76	110	119	136
Total Value of Loans	\$20,928.00	\$26,700.00	\$22,050.00	\$32,820.00	\$ 35,200.00	\$ 40,600.00
Average Value of Loans	\$ 243.31	\$ 293.41	\$ 290.36	\$ 298.36	\$ 295.79	\$ 300.00
Value of Loans Outstanding	\$47,740.00	\$58,970.00	\$64,875.00	\$76,655.00	\$ 89,233.33	\$ 99,048.33
Contributions to Fund	\$ 3,900.00	\$ 6,591.12	\$ 6,359.63	\$23,354.33	\$ 14,638.68	\$ 14,238.76
Total Assets of Fund	\$64,878.89	\$65,281.45	\$73,611.39	\$97,489.52	\$116,547.42	\$128,962.03

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


1. Beginning with the fall semester of 1978, the total enrollment of the School of Pharmacy was reduced by approximately twenty percent. This was caused by a change from the one-year prepharmacy/four-year professional program to a two-year prepharmacy/three-year professional program. This change has no direct effect on the annual number of graduates, but it does reduce the number of students eligible for loans from this fund.
2. Because of rising educational costs and the lesser number of students eligible to utilize this fund, beginning with the fall semester of 1978, the maximum loan was raised from \$200 to \$300 per semester and the total loan ceiling from \$1600 to \$1800.

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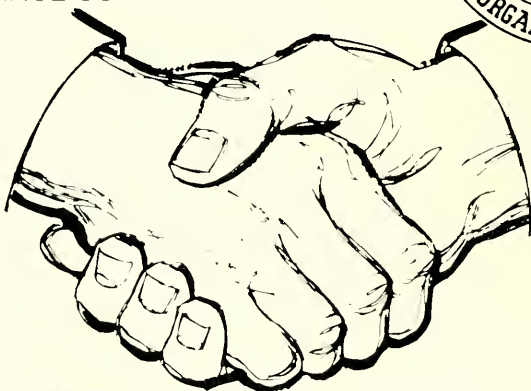


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ANTACIDS IN PEPTIC ULCER DISEASE**By Nancy Stephens, Pharm.D.****Clinical Pharmacist****Charlotte Memorial Hospital and Medical Center***I. Introduction*

Antacids have been used for acid-peptic disease since the first century A.D.¹ Schwarz's dictum in 1925 "no acid, no ulcer"² is true at least for duodenal ulcers; duodenal ulcers are associated with increased acid secretion. In contrast, gastric ulcer can occur in persons with barely detectable levels of acid. Other factors such as reflux of bile into the stomach causing mucosal damage may play a role in the pathogenesis of gastric ulcer.⁴ Antacids raise the pH of gastric contents, thereby decreasing optimum pepsin activity which occurs at pH 1.8–2.5. Aluminum hydroxide has also been shown to bind bile acids.⁵ In vivo, antacids seldom raise the pH 2.0 of the stomach above 4.0. At this pH, 99% of the acid is eliminated.^{6,7}

II. Effectiveness of Antacids

In vitro, tests of antacids have been performed to determine relative buffering capacities.^{9,10,11} Table I lists characteristics of antacids including those presently approved for use at CMH&MC. For healing of a duodenal ulcer, an antacid dose of 140 mEq of HCl neutralizing capacity should be used according to the Peterson study. Doses should be administered one hour after meals because food remaining in the stomach delays gastric emptying and helps to retain the liquid antacid in the stomach, prolonging the neutralizing effect. Administration of doses 3 hours after meals and at bedtime are necessary to continue the reduction of acid entering the duodenum at times when hydrogen ion concentrations rise sharply following the previous doses.^{10,13,14,15}

The clinical efficacy of antacids in ulcer disease was first established in 1977 by Peterson et al.⁸ In this randomized, placebo-controlled study, 74 patients with endoscopically-proven duodenal ulcer completed a 28-day treatment regimen. Patients were treated with 30 ml. of Mylanta II liquid (found to neutralize 144 mEq of HCl) or liquid placebo at 1 and 3 hours after meals

and at bedtime. Complete ulcer healing was present at 28 days in 28 of 36 antacid-treated patients (78% healing) as compared to 17 of the 38 placebo-treated patients (45% healing).

*III. Myths about Antacids*¹⁶

Myth #1: Most antacids are high in sodium content and Riopan[®] is the lowest in sodium. This statement was accurate several years ago before most antacid products were reformulated to reduce sodium content. As shown in Table I, sodium content of the leading antacids is no longer a problem.

Myth #2: Calcium-containing antacids are constipating. Almost everyone has read or been taught that calcium carbonate causes constipation. The belief has been handed down in textbooks of medicine and pharmacology for many years without references to supporting evidence. Clemens and Feinstein have performed an exhaustive review of the literature going back as far as the 1650 *London Pharmacopoeia* on the subject. The results of this search are quite interesting and indicate that calcium carbonate not only may not be constipating, but may occasionally act as a laxative.^{16,17}

Myth #3: Antacids are more effective than placebos in relieving duodenal ulcer pain. Although it has been generally accepted in the past that antacids relieve the pain of duodenal ulcer, evidence for this is lacking.^{17,18} Hollander and Harlan could not demonstrate that the administration of 420 mg of calcium carbonate every hour to duodenal ulcer patients was more effective in relieving pain than a placebo. However, rebound acidity caused by calcium carbonate was not examined in this study. Sturdevant et al.²⁰ found no significant differences between antacid and placebo in the time of onset, degree, or duration of pain relief

(Continued on page 12)

Table I^{9,12}

CONTENT PER 5 ML.

PRODUCT	$Al(OH)_3$ Content	Content	$Mg(OH)_2$ Simethicone	Volume to Neutralize 140 mEq HCl (ml.)	Na Content (mg/5mL)
Alternagel	600mg			60	2
Amphogel	320mg			110	7
Gelusil	200mg	200mg	25mg	60	<1
Gelusil II	400mg	400mg	30mg	30	1
Maalox	225mg	200mg		50-60	1
Maalox Plus*	225mg	200mg	25mg	50-60	1
Maalox Plus Tablets*	200mg	200mg	25mg	13 tablets	1 tablet
Maalox Therap. Conc.*	600mg	300mg		25-30	<1
Mylanta	200mg	200mg	20mg	55	<1
Mylanta II	400mg	400mg	30mg	30	1
Mylanta II Tablets*	400mg	400mg	30mg	7 tablets	1 tablet
Phillips Roxane*	350mg			60	2
Riopan	(400mg magaldrate) †			60	<1
Riopan Plus	(400mg magaldrate)		20mg	60	<1

* Available on CMH&MC Formulary

† Magaldrate = chemical combination of $Mg(OH)_2$ - $Al(OH)_3$


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ANTACIDS

in two double-blind controlled randomized trials, one of which used larger doses of a highly potent antacid. This led to their conclusion that factors other than reduction of gastric acidity may be important in relieving the pain associated with peptic ulcer disease. In other studies, Littman et al.²¹ have found that aluminum hydroxide gel was no better than placebo in relieving spontaneous or induced ulcer pain. In the Peterson study, relief of symptoms did not differ in the antacid group compared with the control group, nor did symptoms correlate with ulcer healing or even a decrease in ulcer size in either group. From the evidence available, it appears that "any medicine which is white and advertised as an antacid will give relief from ulcer pain."¹⁸

IV. Drug Interactions

Of the many proposed drug interactions with antacids, a few deserve mention due to their particular clinical significance. Antacids interfere with the absorption of cimetidine, tetracycline, oral contraceptives, warfarin, and ferrous sulfate.^{22,25} These drugs should not be taken simultaneously with antacids. By altering urinary pH, antacids decrease the urinary excretion of quinidine and other weak bases which may lead to toxicity.²⁶ Antacids also alter the effect of enteric coated products (e.g. bisacodyl tablets), causing them to release their contents in the stomach when given concomitantly.²³

V. Selection of an Antacid

Criteria for the selection of an antacid product include potency, sodium content, incidence of side effects, taste, and cost. The calcium carbonate antacids are the most effective neutralizers as a group. Calcium containing antacids should be avoided for chronic, however, intensive therapy of ulcers because of associated hypercalcemia, rebound hyperacidity, and the milk alkali syndrome. Sodium bicarbonate should not be used for treatment of ulcer due to risks of sodium load and systemic alkalosis.²³ The antacid of choice for peptic ulcer disease is a

combination of magnesium hydroxide and aluminum hydroxide, preferably a double-strength liquid product. No antacid is devoid of side effects, and this combination of ingredients may induce nonsystemic changes in bowel function. Aluminum-containing products cause constipation while magnesium products cause diarrhea. When both ions are present, there may be normal bowel function, diarrhea or constipation; diarrhea is the most common alteration.²³ If diarrhea occurs with this combination of ingredients, an aluminum antacid should be substituted at alternating doses with the combination product. Magnesium containing antacids should be avoided in patients with renal failure due to the risk of development of hypermagnesemia. Perhaps the major disadvantage of safe and effective antacid therapy is that antacids are often not taken as directed. Unpleasant taste of many antacid preparations is, an important cause of noncompliance, according to a recent study by Klein and Lieberman.²⁷ Using the Oregon Antacid Evaluation Scale (which tests for appearance, bouquet, body, sweetness, flavor, and aftertaste), Mylanta II, Maalox Therapeutic Concentrate, and Mylanta (Regular Strength) were ranked as the top three palatable choices.

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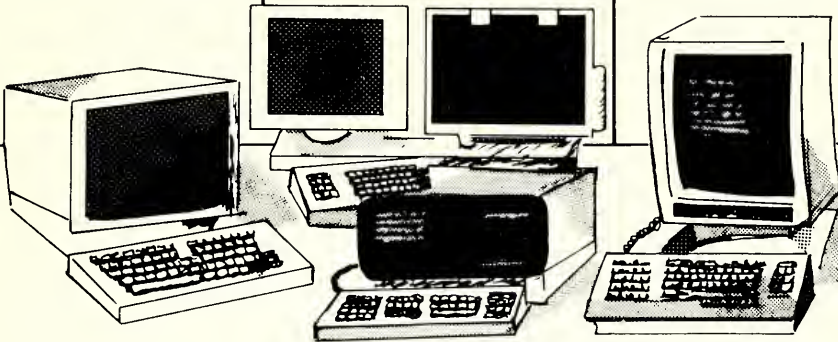
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Jack L. Tyler, Ph-Mgr.

Issued 9/4/84

Revco Discount Drug Center
5412 E. Independence Blvd.
Charlotte, NC 28212
Sherrod S. Whitesell, Ph-Mgr.

Issued 9/4/84

Revco Discount Drug Center
222 Signal Hills Dr.
Statesville, NC 28677
Martin Ray Lewis, Ph-Mgr.

Issued 10/10/84

Mountain Park Hospital & Medical Ctr.
Whitaker Lane, P. O. Box E
Andrews, NC 28901
Kay Jones Turner, Ph-Mgr.

Issued 9/14/84 (T/O)

The Medicine Shoppe
P. O. Box 508
Bladenboro, NC 28320
R. Earl Baxley, Ph-Mgr.

Issued 9/14/84 (T/O)

Farmco Drug Center
421 Chopanoke Lane
Raleigh, NC 27603
Joe Dan Gardner, Ph-Mgr.

Issued 9/17/84

Eckerd Drugs
8532 University City Blvd.
Charlotte, NC 28213
Carl V. Christensen, Ph-Mgr.

Issued 9/17/84

Kerr Drugs
4711 Hope Valley Rd.
Durham, NC 27707
Roger D. Johnson, Ph-Mgr.

Issued 9/17/84

Rite Aid Pharmacy
Lakewood Plaza, Hwy. #24
Roseboro, NC 28382
Linda Bond, Ph-Mgr.

Issued 9/17/84

The Prescription Shop
Hwy. 220 N.
Summerfield, NC 27358
Charlene S. Wilson, Ph-Mgr.

Issued 9/17/84

Vaughn Independent Phcy. & Home Health,
Inc.
Kroger Plaza, 83 S. Elliott Rd.
Chapel Hill, NC 27514
Jonas B. Daugherty, Ph-Mgr.

Issued 9/27/84 L.S.P.

Cumberland Co. Health Department
227 Fountainhead Lane
Fayetteville, NC 28301
Ellon S. Barlow, Ph-Mgr.

(Continued on page 28)

CANDIDATES LICENSED BY RECIPROCITY

Herschell Emmett Anderson
Georgia

Virginia Ruth Baldwin
Texas

Henry Eden Calhoun, Jr.
Alabama

Maureen McGrath Culhane
Minnesota

James Paul Cunningham, Jr.
Ohio

Bethel Louise Eddy
Texas

Hugh Allan Farnsworth
Virginia

Daryl Gene Fite
Alabama

Joe Norman Gibson
South Carolina

Thien-Chu Ho
Maryland

Gary Keith Hobbs
Michigan

Samuel Charles Lang
West Virginia

Carol Solberg LaPonte
New York

Benney Layton May
West Virginia

Gina Marie Petrozzi
Illinois

Raleigh Jackson Putnam, II
Louisiana

Sara (Sally) Drake Qualheim
Virginia

Brian Stephen Quigley
Massachusetts

Nancy Louise Speakman
New York

Michael Gregg Tanner
Alabama

Catherine Nancy Verme
Pennsylvania

James Oliver Warren, Jr.
Maryland

LICENSED AUGUST 2, 1984

Larry Dean Hart
Virginia

CONGRATULATIONS TO



BILL ROUGHTEN

On his new store, Bear Pharmacy, in Nags Head. We are pleased to have been a part of designing this store and supplying the fixtures and equipment.

H. Warren Spear R. Ph.
Pharmacy Design Specialist
415 Augusta Drive
Statesville, North Carolina 28677
(704) 873-9993

Spear Associates—planners, designers and installers of pharmacy fixtures & equipment

CHARLOTTE WOMAN'S PHARMACEUTICAL AUXILIARY

The Charlotte Woman's Pharmaceutical Auxiliary had its first meeting of the year Tuesday, September 11 at the Park Road YWCA. Mrs. Douglas Corwin, president presided.

Cathy Fritts Wilkins, a Duke Power Company education representative was the guest speaker. Her topic was Energy Conservation. She also gave many tips on holiday crafts, decorations and recipes.

A business meeting followed the noon luncheon.

Respectfully submitted,

Billie Dangehart

Corresponding Secretary

STATESVILLE

Congratulations to Lowry Drug Co. Inc. and its founder, Fred W. Lowry, Sr., on the 25th anniversary of the business. The company opened for business May 1, 1954. Lowry was graduated from the University of South Carolina in 1952 and managed a Lowell drug store prior to working as a salesman with Upjohn in Florida. He came to Statesville in 1954. Associated with Lowry are Fred Lowry, Jr. and Theresa M. Lowry, his son and daughter-in-law, both pharmacists.

HENDERSONVILLE

Economy Drug Store has merged with Economart Discount Drug Center of Brevard. Robert C. Wilson will remain as pharmacist manager and Jack Romaine will continue as pharmacist.

NEW BERN

Carol Labadie, pharmacist at Medical Arts Pharmacy, was installed as president of the New Bern Business and Professional Women's Club late in May.

MARSHVILLE

Sam S. Goodwin, co-owner of Marshville Drugs, and Family Pharmacy, Wingate, was named an Honorary Life Member of North Carolina Distributive Education Clubs of America. The award was made during the statewide honors banquet held at the Civic Center in Charlotte.

DENTON

Delbert Cranford has become part owner and pharmacist at Denton Drug Store, and is associated with Bob Barrett and Harold Tanner, who also operate stores in Denver and Asheboro. Cranford formerly managed Mann Drug Store #2 in Asheboro for sixteen years, and was employed also by Revco Drugs.

PHARMACISTS SALARY RANGES—STATE OF NORTH CAROLINA EMPLOYEES

TITLE	GRADE RANGE	
Pharmacist I	73	22,572-34,524
Pharmacist II	75	24,756-37,956
Pharmacy Clinical Specialist I	77	27,204-41,760
Pharmacy Clinical Specialist II	78	28,560-43,788
Pharmacy Services Manager I	77	27,204-41,760
Pharmacy Services Manager II	78	28,560-43,788
Pharmacy Services Manager III	80	31,416-48,216
Pharmacy Program Manager	81	32,916-50,544
Facility Survey Phar- macy Consultant	75	24,756-37,956

Prepared by Laura Bradshaw, Personnel Analyst, North Carolina Memorial Hospital and Thom Wright, Personnel Analyst, Office of State Personnel.

*Reprinted from NCSHP Newsletter, September 1984, Vol. 5, No. 5 Page 8.

LETTERS TO THE EDITOR

The *Carolina Journal of Pharmacy* welcomes letters from its readers and will publish those meeting certain criteria with the authorization of the writers. Letters should be to the point and preferably typewritten. Letters of more than 350 words may be edited. The name of the writer will be published unless otherwise requested. Letters should be sent to *The Carolina Journal of Pharmacy*, P.O. Box 151, Chapel Hill 27514.

Pharmacists and Pfizer... Partners in Healthcare

In your role as a healthcare professional, people seek your counsel. Your personal relationship and your knowledge of their medications make you a valuable source of information and reassurance.

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The new program, The Pfizer Healthcare Series, appears in newspapers and magazines, and on television and radio. Because we recognize that a well-informed public is a

better partner in healthcare, we address the most pressing health issues of the day. The series alerts people to risk factors and symptoms of major chronic diseases such as hypertension, angina, and diabetes. It encourages them to seek professional attention for problems that are all too often neglected.

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KERR DRUGS INSTALLS COMPUTERS

Kerr Drug Stores, Inc., Raleigh, announced the purchase and installation of the Honeywell Compass Pharmacy Computer System in the 45 store chain, at a press briefing held at the North Ridge Country Club, Wednesday, September 5, 1984. Kerr is the largest chain in the state to put computers in all of its pharmacies.

Kerr's system, called CHIP (Customer Health Information Plan), can compute current drug prices, maintain third-party records, monitor inventory, keep patient profiles and

check for drug allergies and interactions and print labels and management reports. Each in-store system communicates with the headquarters host processor for file and price updates and third party billing.

Kerr Drugs is one of the larger independent drug store chains in the country. The first Kerr store was opened in Raleigh in 1950 by the founder and president, Banks D. Kerr, and the chain claims to be the market leader in Wake, Durham and Orange counties. Two new stores are planned for 1984 and further expansion is planned, including penetration of the Charlotte market.



Left to right:
Charles Maready, Senior Vice-President
Terri Bostick, Director of Pharmacy Systems
Banks D. Kerr, President
Jimmy Jackson, Director of Pharmacy Services

OWENS & MINOR ANNOUNCE PROMOTIONS

Owens & Minor, Inc. is pleased to announce two promotions in the Wholesale Drug Division.

A new level of management has been created by the establishment of Divisional Vice Presidents within the Wholesale Drug Division and Medical/Surgical Division. *Edward J. Flynn* has been elected *Vice President, Wholesale Drug Division*. Mr.

Flynn is currently the Richmond Wholesale Drug Branch Manager and will continue in that capacity also.

Dennis Webb will move from Wilson, N. C. to Corporate Headquarters in Richmond and become *Assistant General Manager of the Wholesale Drug Division*. He will report to Howard Bush, Corporate Vice President and General Manager of the Wholesale Drug Division. Mr. Webb has been Branch Manager in Wilson for six years.

COALITION FOR HIGH BLOOD PRESSURE CONTROLLED FORMED

High blood pressure is a major contributing factor to heart disease and stroke which are the first and third leading causes of death in North Carolina. Recent efforts in the control of high blood pressure appear to have contributed to declines in death rates from cardiovascular diseases. There are still 1.2 million people in North Carolina who live with high blood pressure.

In an effort to promote programs to continue these trends of declining rates, the North Carolina Coalition for High Blood Pressure Control was formed. The coalition is comprised of professionals, lay people, and organizations concerned about the major health problems associated with high blood pressure. This non-profit organization was established in March 1984 with the support and assistance of the Adult Health Section of the Division of Health Services.

The primary functions include:

- assisting in the coordination of resources in a statewide effort to combat high blood pressure
- serving as a forum for discussion of issues and ideas concerned with the control of high blood pressure
- contributing to local and statewide efforts toward raising the level of awareness of people of high blood pressure and its related problems

All interested individuals or agencies concerned with the control of high blood pressure or related areas are invited to join. The first annual meeting will be held on March 15, 1985 in Raleigh. The program will include a panel of nationally known speakers, exhibits, and mini-sessions. If you are interested in becoming a member of the coalition and/or would like to attend the first meeting, please contact Becky Smith at 919-875-3717, Hoke County Health Center, 429 E. Central Ave., Raeford, North Carolina 28376. Additional information will be forthcoming to all health departments and other agencies that request it.

CONGRATULATIONS TO



WALLY JOHNSON

On remodelling Wally's Pharmacy in Mt. Airy. We are pleased to help make this store more attractive and shoppable.

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Pharmacy Design Specialist
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Table 1

AVERAGE HOSPITAL PHARMACY Preliminary Report

	(1983 (1,091 Hospitals)	1982 (2,169 Hospitals)	Percent of Change
Bed capacity	233	245	-5.1%
Class	Private (nonprofit)	Private (nonprofit)	
Profile	General	General	
Census (beds occupied)	68%	71%	
Admissions	7,716	8,657	-12.2%
Length of patient stay	7.5 days	7.3 days	
Hours central pharmacy open/week	90	95	- 5.6%
Pharmacist hours/week	245 (6.1 FTE.)	278 (7.0 FTE.)	-13.5%
Technician hours/week	231 (5.8 FTE.)	255 (6.4 FTE.)	-10.4%
Support hours/week	100 (2.5 FTE.)	117 (2.9 FTE.)	-17.0%
Inventory	\$101,162	\$112,262	-11.0%
\$ 1.75/Patient day		\$ 1.77/Patient day	- 1.1%
\$ 434/Bed		\$ 458/Bed	- 5.5%
\$ 640/Occupied bed		\$ 645/Occupied bed	- 0.8%
13.11/Admission		\$12.97/Admission	+ 1.1%
Purchases	\$733,989	\$742,734	- 1.2%
\$12.69/Patient day		\$11.70/Patient day	+ 8.5%
\$3,150/Bed		\$3,032/Bed	+ 3.9%
\$4,645/Occupied bed		\$4,270/Occupied bed	+ 8.8%
\$95.13/Admission		\$85.80/Admission	+ 10.9%
Inventory turnover rate	7.2 times	6.6 times	
Floor area (central pharmacy)	1,495 sq. ft.	1,600 sq. ft.	
Services offered by over 60 percent of pharmacies:			
Monitoring patient profiles		Monitoring patient profiles	
Monitoring drug interactions		Monitoring drug interactions	
Providing drug information services		Providing drug information services	
Drug therapy consultation		Drug therapy consultation	

A PREVIEW OF 1983 HOSPITAL PHARMACY OPERATIONS

Selected operating statistics from 1,091 hospital pharmacies in the United States were compiled to create a composite profile of the "average" hospital pharmacy for operating year 1983. Since this hypothetical hospital pharmacy represents a wide range of information, the figures may be too general to use for comparative purposes. However, trends can be observed by comparisons with similar statistics published in earlier editions of the *Lilly Hospital Pharmacy Survey*.

Table 1 shows that bed capacity for the average hospital was 233 in 1983—a 5.1 percent decline from the previous year. With the implementation of prospective reimbursement (DRG's) and the continuing emphasis on cost containment, it is not surprising that the "functional" bed capacity of this hypothetical hospital declined. It is also interesting that all other major categories showed reduced figures when compared with 1982 data. Census fell from 71 percent to 68 percent. Admissions were also lower in 1983—down 12.2 percent—and resulted in a somewhat longer patient stay (7.5 days) than that of the previous year. Consistent with an earlier trend, the largest segment of reporting hospitals was the private, non-profit institution.

The number of hours the central pharmacy was open as well as the hours worked by pharmacists, technicians, and support personnel declined substantially during 1983. Overall, the total hours worked per week by the hospital pharmacy staff fell almost 13 percent when compared with the figure for the year earlier. The number of hours of pharmacist time required for each hour the central pharmacy was open during 1983 was 2.7—somewhat lower than the 2.9 reported last year. The ratio of technician hours worked to hours open also declined but to a lesser degree (from 2.7 to 2.6). Support personnel hours worked per hours open also fell—down from 1.2 to 1.1 during 1983.

The dollar values reported for inventory and purchases were lower for the operating year 1983 (down 11.0 percent and 1.2 percent respectively). The estimated turnover rate showed another significant increase, from 6.6 to 7.2 times. Interestingly, if the turnover rate

had remained at 6.6 times during 1983, inventory would have been about \$10,000 higher, down only about 1 percent from 1982. Also noteworthy is the fact that hospital pharmacy managers have improved their turnover rate more than two full turns since 1977—from 5.1 to 7.2 in 1983. This suggests that managers of hospital pharmacy operations are continuing their efforts to exercise more control over inventory investments.

Hospital pharmacy managers have indicated that comparisons between data representing two or more years' operations may be more conveniently expressed in terms of patient days. During 1983, inventory equaled \$1.75 per patient day, a 1.1 percent reduction over the previous year. Purchases were \$12.69 per patient day, a rise of 8.5 percent. Since these data do not account separately for inflation, it is impossible to single out its influence on inventory and purchases statistics from patient use of drugs and related items.

Services offered by over 60 percent of hospital pharmacies that contributed data to the *Survey* remained unchanged from the previous year. Drug therapy consultations showed the largest growth rate during the

(Continued on page 36)

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two-year period, with 69.6 percent offering this service in 1983 as compared with 65.9 percent in 1982. These data suggest that clinical services among reporting hospital pharmacists continue to expand.

A comparison of selected operating statistics over the eight-year history of the *Lilly Hospital Pharmacy Survey* shows the following trends:

- Pharmacy hours open rose from 74 to 90 (an increase of 21.6 percent).
- Pharmacist hours worked per week advanced 61.2 percent from 152 to 245), or almost 8 percent per year.

—Technician hours worked per week varied but increased overall from 129 to 231 (a 79.1 percent increase, or about a 10 percent increase per year).

—Inventory investment rose 47.4 percent, an annual growth rate of about 6 percent for the eight-year period. In terms of patient days, the increase was 78.6 percent at an annual rate of almost 10 percent.

—Purchases grew 125.6 percent during this time span, with an annual growth rate of over 15 percent. In terms of patient days, the increase was 173 percent, which reflects an annual rate of 21.6 percent.

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THERAPEUTICS AND AN OLDER POPULATION: AN OVERVIEW

Because chronic illness has replaced acute illness as a major health problem, its management must be a priority for the 80s. We need to help older people maintain their health, vigor and mental abilities and younger and middle-aged people delay the onset of chronic illnesses or lessen their effects.

Although 80 percent of people over 65 are healthy and active, many suffer from multiple diseases and are treated with several medications. Drugs, both prescription and over-the-counter, are a cost-effective means of chronic disease management. Yet, even when used correctly, these medications may interact and have the potential to be hazardous to the aging patient.

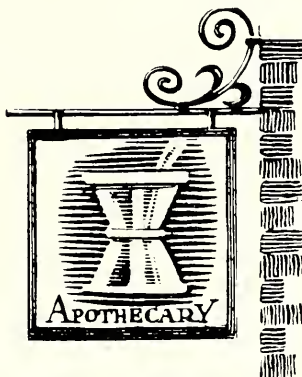
This risk can be reduced. According to the American Association of Retired Persons (AARP), older people want to take more responsibility for maintaining their own health. Frank discussion between patient and health care provider, especially the pharmacist and physician, can help increase awareness of drug/drug interactions and enhance appropriate treatment of individual needs.

As people age, their bodies undergo expected changes that can affect their health. Immune response declines, hepatic and renal functions decrease, and the ratio of lean body mass to fatty tissue decreases altering the distribution of water- and fat-soluble drugs.

Additional factors can affect drug use in the older person. Diet and nutritional status can influence the distribution, metabolism and excretion of drugs, as can such practices as smoking and alcohol consumption. The combination of these factors, together with multiple medication use, makes the older person susceptible to adverse drug reactions and potentially dangerous drug interactions.

The pharmacist can play an invaluable role in helping older patients manage their drug therapies. By monitoring patients' drug-use profiles, including OTC medications, pharmacists can alert patients to specific problems associated with common OTC drugs, such as aspirin interference with anticoagulant therapy, laxative-induced dehydration and electrolyte imbalances and antacid-caused slowdown of drug absorption.

In the future, we will see a continuing rise in the number of healthy older individuals as better health care practices, nutrition and exercise help postpone chronic illness. But older patients will continue to present unique health maintenance challenges, and health-care professionals, including the pharmacists, must provide the information and support these patients need to stay active and well.



The Pharmaceutical Products Division of Abbott Laboratories announces the assignment of two new representatives in North Carolina. Phoebe Tart as recently been assigned to the Hickory area after completing four weeks of initial training. Phoebe received her B.S. in Nursing from the University of North Carolina at Charlotte.

Matthew Weis has been assigned to the Wilson area. He graduated from Franklin University in Columbus, Ohio, with his B.S. in Business Administration. Most of the Abbott four weeks training took place at the sales training facilities in North Chicago.



A little glad,
a little sad,
a lot wiser.

We enjoyed the pleasure of their company, these four outstanding young people with their fresh faces and new ideas.

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We taught them about manufacturing, quality control, pharmaceutical research, marketing and sales.

They taught us that the future is in good hands. We even learned from their questions. Certainly, we took their suggestions to heart.

On graduation day we were all a little glad, a little sad and a lot wiser.

Upjohn

We will always treasure them as friends.

From left to right:
Sandra M. Sims - West Virginia University
Michael C. Smickous - Rutgers College of Pharmacy
Terence G. Hustand - University of Southern California
Amy L. Klap - Ferris State College

MARRIAGES

SUSAN KIMBERLY CLIFTON and Emery Denny Ashley were united in marriage August 4, 1984 at the First Baptist Church in Smithfield. The Rev. John L. Ryberg performed in ceremony.

The bride is a 1983 graduate of the School of Pharmacy, University of North Carolina in Chapel Hill and is a staff pharmacist at Johnston Memorial Hospital. The groom is employed in the trust department of First Citizens Bank in Raleigh and received his degree in trust management from Campbell University. The couple live in Garner.

Cynthia Ann Harris and MARSHALL BROWER BOWDEN, JR. were married Saturday, August 18, 1984 in a double-ring ceremony at Mouzon United Methodist Church in Charlotte.

The bridegroom is a 1981 graduate of the UNC School of Pharmacy and is a pharmacist at N. C. Memorial Hospital in Chapel Hill. The bride is graduate of UNC-Chapel Hill and is employed by the W.N.C. Conference of the United Methodist Church. The couple live in Chapel Hill.

MARISSA DAWN WILLIAMS and Phillip A. Conti, both of Raleigh were married Saturday, September 22, 1984 in College Place United Methodist Church in Greensboro.

The bride, a graduate of the School of Pharmacy, University of North Carolina at Chapel Hill is a pharmacist at Eckerd Drugs. The groom, a graduate of N. C. State University, is a driver for United Parcel Service.

Memorial Baptist Church in Buies Creek was the setting on Saturday September 22 for the exchange of wedding vows between Wendy Lee Byrd and CHARLES HENRY BUCHANAN, JR., both of High Point. The double-ring service was conducted by pastor William Stillerman and former pastor, Henry Stokes.

The bride is a graduate of the University of North Carolina at Chapel Hill and is a registered nurse at the N.C. Baptist Hospital in Winston-Salem.

The groom graduated from the UNC School of Pharmacy and is employed as a registered pharmacist with Eckerd Drugs in Winston-Salem. The couple will reside in High Point.

Carol Selma Johnson of Goldsboro and JAMES RICHARD SESSIONS JR., of Goldsboro were married on Sunday, September 30 at El Capital Meadows, Yosemite National Park, CA.

The bride received a B.S. Degree in Dietetics from the University of California, Davis. She is employed as a Nutritionist at Wayne County Health Department, Goldsboro.

The groom graduated from the University of North Carolina School of Pharmacy with a B.S. degree. He received a Doctor of Pharmacy degree from Mercer University, Atlanta, GA. He is a pharmacist at Wayne County Memorial Hospital, Goldsboro.

The couple will reside in Goldsboro, N.C.

Wanda Jo Wall and MARK WILLIS PELL exchanged wedding vows September 15 at the Raleigh Little Theater Rose Garden in Raleigh. The Rev. Henry Lovelace performed the ceremony.

The groom graduated from the UNC School of Pharmacy and is pharmacy manager at Kerr Drug Company in Raleigh's North Hills Mall. The bride is a graduate of UNC in Greensboro and holds a BS degree in nursing. She is a staff nurse at Wake Medical Center in Raleigh. The couple reside in Raleigh.

BIRTHS

Bob and Betsy Boynton of Erwin, announce the birth of a son Jonathan Mark on March 19, 1984. Jonathan weighed 5 lbs 4½ oz. and was 18¾ inches long. The former Betsy Ellington is a 1980 graduate of UNC in Psychology, and Bob is a 1980 graduate of the UNC School in Pharmacy. Bob is employed by Kerr Drugs in Dunn.

1985 POISON PREVENTION WEEK

National Poison Prevention Week will be observed March 17-23, 1985, with the theme "Protect Your Children and Grandchildren from Poisoning." A new poster and a list of available materials is available from The Secretary, Poison Prevention Week Council, P.O. Box 1543, Washington, DC 20013. Pharmacists should begin to plan now for 1985, so order your initial supplies now.

CLASSIFIED ADVERTISING

Classified advertising (single issue insertion) 25 cents a word with a minimum charge of \$5.00 per insertion. Payment to accompany order.

Names and addresses will be published unless a box number is requested.

In replying to "blind" ads, address Ad. No., Carolina Journal of Pharmacy, P. O. Box 151, Chapel Hill, NC 27514. Telephone (919) 967-2237.

Charter Pines Hsp., a private psychiatric facility in Charlotte, NC, is seeking a licensed pharmacist to direct pharmacy services including continuing education for staff and patient training, hsp. purchasing and central supply activity. Excellent opportunity to take part in opening and staffing a new hospital with a psycho-dynamic approach to psychiatric treatment in inter-disciplinary team setting. Excellent salary and benefit package. For additional information contact: Ms. Anne Helms, Director of Human Resources, Charter Pines Hsp., 3816 Latrobe Dr., Suite 200, Charlotte, NC 28211. (704) 365-5368.

Pharmacist Wanted for independent pharmacy in Eastern NC. No nights or Sunday work. Contact Wayne Avery—Day (919) 243-3176; Nights (919) 237-7342. Send Resume to: Wilson Drug Co., Inc. Drawer 2505, Wilson, NC 27893.

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SALESMEN AND SALESWOMEN WANTED: For pharmacy computer systems marketing. Contact: James Hall, Computascript, Systems Research and Development, P. O. Box 12221, Research Triangle Park, NC 27709. (919) 544-1730.

FOR SALE: SPERRY UNIVAC DRUGTRIEVER—\$1,000.00. Overall dimensions of unit including the exterior panels: Width—103", Height—94¼", Depth—41¾". 110 Volts. It shall be the responsibility of the buyer to disassemble and remove the unit from the premise within seven days of purchase. For inspection, contact Exter Gilmore, Jr., Purchasing Department, Durham County General Hsp., 3643 North Roxboro St., Durham, NC (919) 471-3411 ext. 424, from 8:30 a.m. to 5:00 p.m., Monday through Friday.

PHARMACY FOR SALE: Only pharmacy in small N.C. town. Business good and growing. Excellent potential. Confidential please. Reply Box No. RB, NCPHA, P. O. Box 151, Chapel Hill, NC 27514.

STAFF PHARMACISTS NEEDED: The Memorial Hsp., a 500-bed community hospital, is seeking highly motivated staff pharmacists to help implement new mobile decentralized unit dose ADN I.V. Admixture Programs. Following the implementation of these services, the department will begin development of a clinical program. Get in on the ground floor of a growing department. Located in south-central Virginia with convenient access to mountains, lakes, and larger metropolitan areas. Please call or send resume to The Memorial Hospital Personnel Dept., 142 S. Main St., Danville, VA 24541.

RETIRING PHARMACIST WITH EXTENSIVE BACKGROUND: In hospital, retail, nursing home and nursing home pharmacy, interested in part time or relief work in the Durham, Chapel Hill, or Raleigh area. Contact NCPHA, Box HLK, P. O. Box 151, Chapel Hill, NC 27514.

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with ease. While it alerts you of patient allergies or potentially harmful drug interactions.

In short, the Compute-Rx system helps you become more professional and more profitable all at once.

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So whether or not you're presently considering putting in your own computer, think what the Compute-Rx system can do for you.

It's the one designed with your needs in mind.



The Compute-Rx system was developed by Preston Hale and Wayne Hagus over a four-year period in their own pharmacies. The system has become so popular that it's now used in a growing number of community pharmacies, chain drug stores, and schools of pharmacy.

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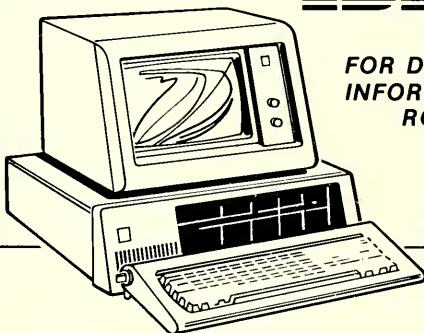
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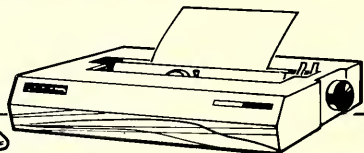


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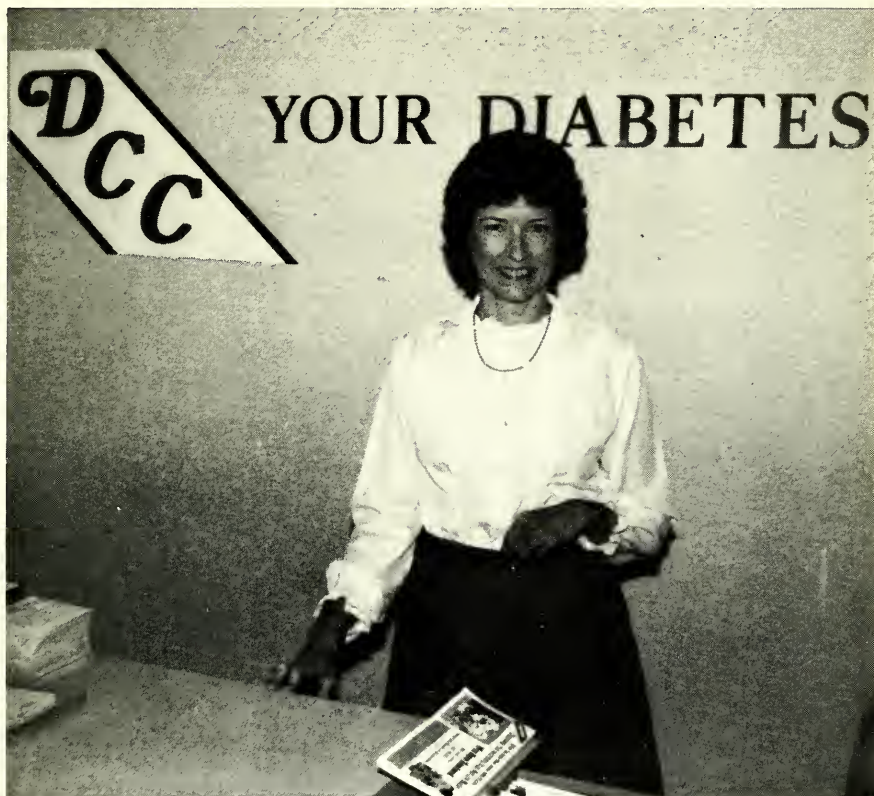
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Peggy Yarborough, in her *Diabetes Care Center*, Cary, was recognized by two national organizations for patient education activities. Story on page 33.

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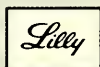
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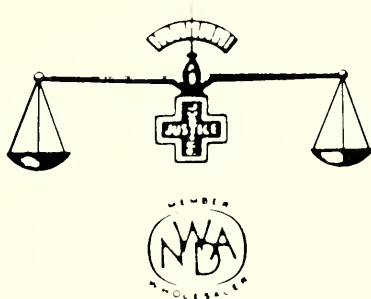
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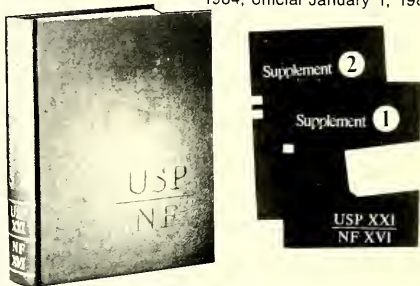
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The President's Message from West of Roseboro



**W. A. West, President
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Have you been audited lately by a third-party company handling medication insurance for your patients?

I recently had that experience. I was audited by a very personable young lady representing the Metropolitan Life Insurance Co. Her name is Patricia A. Guarnieri, from Syracuse, N.Y. and all the arguments I could muster were to no avail as this lady had been well schooled by her company to do her job. As some of my colleagues have found out, there is not much argument that can be made under the contract that Metropolitan requires to participate in their program.

For several years I have wrestled with the third-party issue. I helped initiate formation of the Third Party Committee of our Association and have served on it, met with discussion groups at NARD and APHA Conventions and done a lot of reading. All these meetings have ended in frustration for me as to how to cope with third-party per se.

It made no difference to the auditor that the cash discounts received from my suppliers were obtained because I met certain substan-

tial investments in additional or excess stock, or paid my bills early to obtain concessions. The ingredient cost of the medication was not determined after some of the obvious expenses of containers, cost of wholesalers microfilm, expense of labeling from the wholesaler, dead stock, delivery or freight cost, just to name a few. Some so-called rebates are, in my opinion, only returns on investments in a company whose stock I have purchased. To the third party company, however, this does not enter into the determination of the actual cost of the medication. In my opinion this is unfair and not a true determination of the actual cost of the medication.

Antitrust legislation was enacted to protect small business against business giants. This protection has been altered by the emergence of the third-party prescription program. Giants are the ones being protected by the antitrust laws at the expense of small pharmacies . . . small business people. As one pharmacist I don't have much clout with a third-party giant such as Metropolitan Life Insurance Co. The fact is, as my auditor friend made very clear, I don't have to participate in their program. As I pointed out to her, this is not quite true. If I want to survive in business, I must be competitive, as I found out by not joining the PCS group and thereby losing a substantial amount of business to a new pharmacy just opening, who was happy to get business at any fee. I must remain competitive.

As I see it, the only salvation to this dilemma is for pharmacists to be allowed to negotiate fair fees collectively through groups or, as in our case in North Carolina through our state association.

For this to happen, the federal antitrust laws will have to be amended. This has been done for the unions. It could be done for pharmacy but only if our national associations work jointly and with the joint effort of grass root local and state societies. Now is the time before it is too late and our profession is enundated by forces outside the profession who can and will dictate our economic demise.

(Continued on page 6)

PRESIDENT'S MESSAGE

If you participate in Metropolitan's Medimet program, there is one thing you might do now to help yourself and fellow pharmacists. If you are not satisfied with the fee you now "accept" from this giant company, write to John Giocovelli, Oneida County Industrial Park, Medimet Drug Claim Office, Utica, N.Y. 13504. He is a pharmacist consultant with Metropolitan. I've been told that he might hear our complaint and is in a position to do something about it if he feels it is legitimate. I have also been told that Metropolitan reviews the fee structure each year. I don't know if this is true or not. If it is, surely this giant company should know that the fee is inadequate.

I intend to write him and let him know how inadequate and unfair his company's fee is to the pharmacists of NC. I hope you will too.

HAVE YOU MOVED?

We try to maintain an accurate mailing list to insure prompt delivery of your NCPHA mailings, but sometimes an address change is missed. If you have moved or are planning to move soon, please check the label on the cover of this issue of *The Carolina Journal of Pharmacy* and if your name or address is not correct please complete this form and mail to the NCPHA, P.O. Box 151, Chapel Hill, NC 27514

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CHRISTIAN PHARMACISTS FELLOWSHIP, INTERNATIONAL

The Christian Pharmacists Fellowship, International, a newly incorporated organization founded to promote fellowship among Christian, pharmacists, is now in operation with headquarters in Richmond, Virginia. CPFI is seeking, as a new non-denominational Christian group, to identify pharmacists, pharmacy students and friends of the profession who are interested in its purpose. A complete statement of purpose, a statement of faith and objectives of the organization can be obtained by writing to P.O. Box 8351, Richmond, Virginia 23226.

The formal organizational meeting was held in Atlanta, Georgia in December 1983 at the mid-year meeting of the American Society of Hospital Pharmacists. The Board of Directors includes: Warren Hall of Hewitt, Texas; Roger Lapp of Clearwater, Florida; Dr. Joel Oliver of Tulsa, Oklahoma; Kay See-Lasley of Lawrence, Kansas; Dr. Harry A. Smith of Lexington, Kentucky; Dr. Warren E.

Weaver of Richmond, Virginia and Mark Wright of Okmulgee, Oklahoma. Dr. Weaver was selected to serve as the Executive Director of CPFI.

This is believed to be the first group of its kind offering membership to those pharmacists who are in accord with its purposes, without regard to denominational persuasion. In this respect, it is very similar to other groups which offer membership to physicians, dentists, nurses and allied health professionals. It is believed that bringing Christian pharmacists into communication with one another will improve the quality of their lives and the practice of pharmacy.

It is anticipated that connected groups will be formed eventually at school, state, regional and national levels.

For further information write:

Dr. Warren E. Weaver, Executive Director
Christian Pharmacists Fellowship, International
P. O. Box 8351
Richmond, Virginia 23226
Phone: (804)285-0544

PHARMACISTS' PROFESSIONAL LIABILITY

Should you be concerned?

By Henry Fine, P.D., M.B.A., J.D.

reprinted with permission from The Missouri Pharmacist, August 1984

While pharmacists have one of the best professional liability records of any of the health care professionals, literally millions of dollars a year are being paid by pharmacists and their insurance companies due to professional liability suits.

In an effort to minimize the liability exposure of pharmacists, the Missouri Pharmaceutical Association presented a continuing education program at its annual convention concerning the pharmacists legal liability. In addition, in April of 1984, the St. Louis University Health Law Association, in cooperation with St. Louis College of Pharmacy, presented a full day seminar which included the same topic. The following are some brief but revealing highlights from the two separate programs and the author's life experiences.

Why are pharmacists concerned about liability?

Many reasons have been given for the pharmacists' concern about professional liability. First, drugs appear to be more potent today than in years gone by. Drugs today do a better job when used correctly than they did 100 or 200 years ago. BUT, when incorrectly used, drugs do a better job incorrectly.

Second, our society has more knowledge about drugs than it used to. With an increased knowledge about drugs, the human body and the interaction between the two, more people are able to prove their cases in court.

Third, and a major factor in the cause of professional liability suits for pharmacists, is the decrease in personal relationship with today's patient. Patients do not seem to sue pharmacists they know well, just as you probably would not sue a friend. Yet that impersonal pharmacist that made a mistake in dispensing their medication is, relatively, easy to sue.

Fourth, is insurance. Some people state that because there is insurance, the person suing does not feel as bad about the suit, because even if he/she wins the suit, the pharmacist will not pay. The only real

"person" that will pay is the insurance company, a mere corporation. Fifth, pharmacists' new roles cause an increase in liability exposure changes also. Sixth, people in our society don't appear to settle their own disputes. Instead, they run to their lawyers. Suing used to be a negative concept, now some say "it's in." Seventh, there are too many lawyers. Eighth, Newspapers glamorize lawsuits.

Are pharmacists concerns about liability justified?

It appears that the pharmacists concerns about liability exposure are justified. For example, *Trial*, the magazine to which lawyers that sue doctors and pharmacists quite often subscribe, stated in its May, 1984, issue that, "Adverse drug reactions are the most common cause of medical-legal litigation in this country today."

In addition, a congressional report states that 12 to 17 percent of hospital admissions of people over the age of 70 are due to drug related problems.

A major insurer of family practitioners states that of the family practitioners that do not do surgery, drug malpractice claims are the third leading cause of suits.

A survey of 23 insurance companies that write products liability insurance showed that the product category with the highest settlement average was drugs, the average settlement being \$171,000. The second category was trucks, tractors and mobile homes with an average settlement amount of \$92,000.

What professional mistakes cause pharmacists to be sued?

Pharmacists are sued for dispensing the wrong drug; dispensing the wrong strength of drug (including—not the strength written by the prescriber, over-dose, and under-dose); dispensing the drug over too long a period; and dispensing the drug without giving proper warnings, among other areas.

(Continued on page 9)

"THERE NEVER WAS A PROUDER TIME TO BE A PHARMACIST."

"We are fast approaching a new century—one which offers the promise of great research achievements in the field of human health. And pharmacists will have an important role in this coming adventure. It is instructive to pause for a moment and consider how far we have come in the past century. My grandfather was a pharmacist in the 1890's and the medicines he compounded and dispensed, and the outcomes, had not changed significantly since the time of George Washington. Little could he anticipate the advances in drug development and changes in pharmacy practice.

"A new era began with the start of the twentieth century. Basic scientific discoveries were made in understanding diseases. The first steps toward the design of specific chemotherapeutic agents took place in the Thirties and helped set the stage for a treasure trove of drug products. Pharmacists played a major role in the discovery and development of most of the products we have today. The commitment to research has resulted in marvelous benefits for mankind.

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*Louis C. Schroeter, Ph.D., R.Ph.
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in our understanding of genetics and molecular biology. Upon this base of knowledge will be built the new therapies of the future...and pharmacists will play a vital role in their development. This is indeed an exciting prospect.

"There has never been a prouder time to be a pharmacist."

PHARMACIST'S LIABILITY

Approximately 70 percent of the suits against pharmacists are for dispensing the incorrect product or dispensing the incorrect dose.

A study indicated that approximately 70 percent of the suits against pharmacies and pharmacists were from two major areas of professional mistakes—dispensing the incorrect product and dispensing the incorrect dose.

Another estimation was that 75 to 80 percent of all claims against pharmacists for professional liability were due to dispensing the wrong drug, dispensing the wrong strength, or incorrectly labeling the product.

A case in 1982 is an example of a wrong drug case. A woman had been taking the prescription medicine for five years. On returning from her pharmacy one day, she noticed that the color and shape of her pills were different. She called the pharmacy and the pharmacy employee stated that it must be a generic switch, without checking. The ultimate conclusion was a 1.1 million dollar settlement due to the fact that the wrong drug had been dispensed. She had been taking coumadin instead of the correct medication, alactazide.

For an example of a case involving the incorrect strength (under dosage), a Missouri case out of Jefferson County can be used. A real estate agent had a colon resection. Post operatively the correct medication was given but in too low a dose. The case settled for \$400,000.

After the dispensing errors, the next error that pharmacists find themselves most frequently sued over is lack of consulting. There is a "duty to warn" imposed on the pharmacist. This duty to warn goes to side effects and interactions. In 1983, a woman took her medication as prescribed and the day after she started the medication she had a car accident. She had passed out at the wheel. The case settled for \$50,000. The pharmacist hadn't warned her not to drive until the effects of the drug were determined.

The third area of claims made against pharmacists can be called excessive medication. The typical case here is the middle-aged woman that has been on all sorts of

"valium type drugs" for years. She ends up addicted and in a treatment center. Finally, she gets a lawyer and sues.

Another area of claims against the pharmacist is that of safety caps. The law requires safety caps and if they are not used the pharmacist is merely helping the patients make their case against the pharmacist.

What kind of drugs end up being the topic of claims against pharmacists?

All kinds of drugs can become the topic of legal battles. But, there are a few drugs worth mentioning. First and foremost is coumadin. One pharmacist/attorney who personally sees the claims of over 12,000 pharmacists stated that of all the dollars going out due to claims against pharmacists, coumadin and like compounds account for approximately 50 percent of those dollars. Dispensing of the wrong strength of lanoxin and/or digoxin also contribute to claims against pharmacists. Seeming, the prescriptions are almost always for the higher strength. When the lower strength is written,

(Continued on page 11)

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PHARMACIST'S LIABILITY

and the higher strength is dispensed, problems can ensue. Finally, look-a-likes and sound-alikes account for many claims against pharmacists.

How can the pharmacist avoid professional liability claims?

There are many ways to avoid pharmacy professional liability claims. One, called avoidance, is simple, "don't practice pharmacy." Clearly, if you don't practice the profession you won't be sued for practicing it improperly. But more realistically, for most pharmacists, is the concept, "Be careful." The vast majority of errors are dispensing errors—double check. Possibly set up a system of double checks. One system that has been proposed is to mentally run a check list as you dispense the drug. (Table I)

How to Avoid Pharmacy Professional Liability

Table I

Possible items a pharmacist might wish to include in a mental check list while dispensing drugs.

1. What is the drug I have out to dispense?
2. Is it the correct drug as written?
3. Correct strength as written?
4. Over-dose?
5. Under-dose?
6. Correct length of time on medication?
7. Warnings:
 - A. Side effect?
 - B. Interactions?
 - C. Allergies?
 - D. Pregnant women?
8. Safety Cap?

Pharmacists have two major ways to handle the economic/financial reality of any professional liability program. First, the pharmacist can self insure. This is called retention. This option is dangerous for the pharmacist because of the large dollar costs that our legal system can impose, both in damages to be paid to the plaintiffs and/or lawyer fees (even if you win).

Second, the pharmacists can transfer the economic/financial burden to a third party. An example of a non-insurance transfer is incorporation. When a store owner-pharmacist

incorporates, he transfers much of his personal liability to the corporation and thereby decreases his personal risk. Be sure that the corporation follows the law over the years in areas such as minutes for Board of Directors meetings, so that a Court will not remove the corporate shell and find the store owner-pharmacist personally liable.

Insurance is the other broad category of transfer of liability risk. It is a good idea to read and understand your policies, because insurance doesn't cover everything. It will probably be boring reading, but the time you invest now could save you a great deal of money and aggravation in the future.

Pharmacists must realize that the duties and obligations of pharmacists are constantly changing as the practice of pharmacy is changing.

Finally, pharmacists must realize that the duties and obligations of pharmacists are constantly changing as the practice of pharmacy is changing. You should keep up with the changing practice of pharmacy by reading journals, attending continuing education seminars, and communicating with your fellow pharmacists. The continuing education programs concerning the pharmacist liability exposure contained more detail concerning real cases of pharmacist liability. If you have the opportunity to attend one of these programs, it would be well worth your while.

Hopefully this article will cause you to think about your own situation and what improvements you can make in your everyday practice of pharmacy.

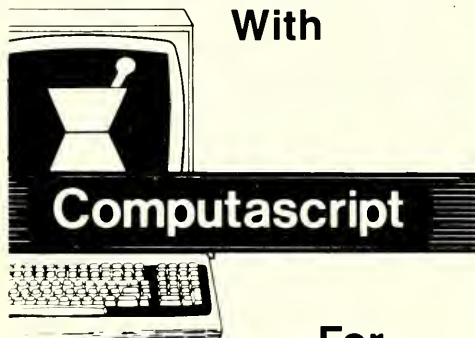
Pharmacist-Attorney, Henry B. Hine, practices law in Clayton, Mo. His emphasis is in the areas of chemicals and drugs. Hine has consulted with multiple pharmacists, pharmacies, pharmaceutical manufacturers and attorneys in areas including products liability, contracts, insurance, professional liability and pharmacy law.

Hine is counsel for the St. Louis Pharmacist Association and has written numerous articles on Pharmacy Law. In 1982, he was presented the James Hartley Beal Award for the best legal paper on Pharmacy Law by the American Society for Pharmacy Law and cosponsored by Ciba-Geigy Corporation.

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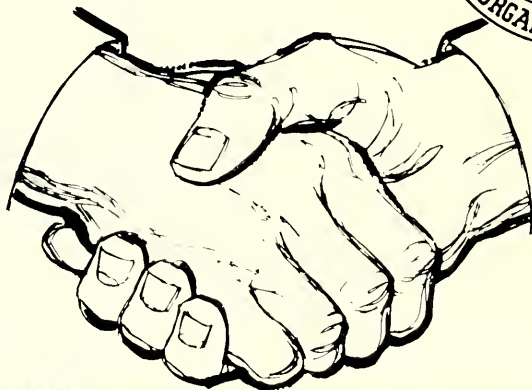
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LOCAL NEWS

CHARLOTTE WOMAN'S PHARMACEUTICAL AUXILIARY

The Charlotte Woman's Pharmaceutical Auxiliary met for lunch at the Park Road YWCA on Tuesday, October 9.

Mrs. Douglas Corwin, president, presided. Spouses and other guests were present.

Guest speaker was Dr. David Citron, acting director of the Charlotte Area Health Education Center and acting director of medical education at Charlotte Memorial Hospital. He is the only Charlottean who is a member of the prestigious National Academy of Sciences Institute of Medicine.

Respectfully submitted,

Billie Dagenhart

Corresponding Secretary

GREENSBORO

The regular monthly meeting of The Guilford County Society of Pharmacists was held at Swain's Steakhouse in Greensboro on Sunday, October 14th, 1984. Following the social hour from 7 p.m. to 8 p.m., a large turnout enjoyed a fine meal and an excellent program. The evening's speakers were five pharmacists from the Cone Hospital Pharmacy staff, each of whom presented a short overview on a drug or drug category of current interest. Each speaker had researched his/her topic extensively, and this program was one of the most useful and informative we have ever had.

Following the program there was a short business session, then the meeting was adjourned.

J. Frank Burton, Sec.-Treas.

COMMENTS ON THE FEDERAL PHARMACY CRIME BILL

Reprinted from the October 1984 issue of R_x Ipsa Loquitur, a publication of the American Society for Pharmacy Law

FEDERAL CRIME. Pharmacist-attorney Bernard B. Brody of Chicago, Illinois, provides some interesting comments regarding the Controlled Substance Registrant Protection Act of 1984, which was passed by the 98th Congress on May 31, 1984 (18 USC 2118). This Act made certain robberies or thefts of controlled substances a federal crime.

"According to the Congressional Record of May 17th, there was considerable debate and inquiry about the fact that the bill required that a theft involve at least \$500.00 worth of controlled substances at the wholesale price. Many believed that the figure was much too high. Others felt that the figure should be higher. Everyone wanted legislation, so they all accepted the \$500 figure for now. They will be closely monitoring its effect to determine if changes are needed in the future.

"However, after everybody got through patting one another on the back, it was determined that in the case where a person attempts to commit a robbery or burglary for controlled substances, but is unsuccessful, prosecution need only show that \$500 or more of controlled substances were on hand and could have been taken. Likewise, if a robber or burglar succeeds in taking controlled substances which cost less than \$500 but more than \$500 of controlled substances were on hand, the robber or burglar may still be prosecuted for attempted robbery or burglary of the required amount. The prosecution need only show the amount and cost of the controlled substances on hand. If the defendant wishes to contest the charge on the ground that he intended to take less than \$500 worth of the controlled substance, then he would either have to take the stand and testify to that effect or submit other competent evidence to show that he did not intend to take \$500 of controlled substances. This is going to be a difficult job. Hence, it is my opinion that the Pharmacist had better keep his inventory up-to-date and be familiar with the wholesale prices so that it can be demonstrated that he had on hand more than \$500 worth of controlled substances, should a burglary or robbery occur."



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EFFECTS OF ASPIRIN AND ACETAMINOPHEN ASSESSED IN OLDER SUBJECTS

by Gary C. Cupit, Pharm. D.

Older patients are heavy users of aspirin and acetaminophen for relieving the aches and pains that accompany aging. These mild analgesics are equally effective on a milligram-for-milligram basis and are widely regarded as safe. However, the growing concern regarding chronic salicylate intoxication and salicylate interactions with other agents has made acetaminophen a safer choice for most indications in people over 55.

For example, oral anticoagulants, methotrexate, probenecid and sulfinpyrazone can interact with aspirin.

With oral anticoagulants, high doses of aspirin (3-4 g daily) can decrease plasma levels of prothrombin, a protein vital to clotting, but the effect is sometimes seen with doses as low as 2 g daily. Aspirin may also produce displacement of the oral anticoagulant from protein-binding sites, resulting in greater free concentration of anticoagulant in the plasma.

Gastrointestinal Bleeding

Of greater clinical significance is the enhanced gastrointestinal bleeding that can occur in patients taking oral anticoagulants and aspirin in doses as low as 2 g daily due to:

- the enhanced hypoprothrombinemic effects;
- the local effects of aspirin on the gastrointestinal tract;
- the ability of aspirin to impair primary hemostasis.

Methotrexate's margin of safety is small. Aspirin enhances the toxic effect of this anticancer drug by competitively inhibiting the secretion of the drug and displacing it from plasma protein-binding sites. The result of both increases the plasma methotrexate concentration.

Avoid High Doses

High concentrations of aspirin also diminish the uricosuric effect of the gout treatment, probenecid. Lower concentrations do not affect the therapy, so that occasional use of aspirin appears to pose no risk for patients taking

probenecid. Sulfinpyrazone's uricosuric action is counteracted by aspirin doses of 3 g per day or higher.

Harmful Effects

Aspirin is probably used by more people and more often worldwide than any other drug, but its potential for harmful side effects and salicylate intoxication is well documented.

Aspirin can cause gastrointestinal erosion and bleeding. Aging patients suffering from gastrointestinal upset also tend to decrease protein and fat intake because they are difficult to digest. And because of poor diets, older patients may be less able to compensate for blood losses.

Numerous reports document aspirin's effect on bleeding time. It interferes with platelet function, inhibiting the release of platelet factor IV and serotonin. Aspirin also abolishes the secondary phase of platelet aggregation normally induced by epinephrine or optimal levels of adenosine diphosphate (ADP). Hence, patients taking aspirin are at increased risk for bleeding episodes.

In the aging, salicylate poisoning is usually the result of unintentional chronic overdose. Signs and symptoms of mild salicylate poisoning include burning in the mouth, throat or abdomen with slight to moderate hyperpnea, lethargy, vomiting, tinnitus, hearing loss or dizziness. These symptoms could be confused with neurologic and other organic problems common in older patients.

Salicylate intoxication is often not diagnosed immediately for many reasons, including failure of patients to volunteer a history of aspirin use and failure of physicians, pharmacists and patients to recognize the spectrum of salicylate-induced neurologic abnormalities. These changes along with other symptoms, difficult breathing or pulmonary edema, unexplained blood chemistry changes, such as ketosis, prolonged bleeding time and acid-base disturbances collectively suggest the diagnosis.

Side effects of acetaminophen in normal doses are rare, but include skin rashes and other allergic manifestations. Acetaminophen seems to have no adverse effect on bleeding time or platelet function.

(Continued on page 18)

The major concern with acetaminophen is its hepatotoxicity when taken as an acute, massive overdose. With prompt administration of N-acetylcysteine, morbidity is markedly lowered and fatality is virtually eliminated. In nonfatal cases, complete resolution occurs and the liver returns to structural and functional normality.

The aging, who are frequent self-prescribers of OTC analgesics, aspirin and acetaminophen, also take drugs to treat chronic illnesses associated with aging: arteriosclerosis, arthritis, adult-onset diabetes, chronic obstructive pulmonary disease, cancer and cirrhosis. The choice between aspirin and acetaminophen depends on efficacy, risk for interaction with other medications and the likelihood of minor or severe side effects and potential toxicity in the individual patient. Frequent communication between the pharmacist and the patient can ensure effective and safe medication.

Gary C. Cupit, Pharm.D. is Clinical Associate Professor of Pharmacology in the Department of Pharmacy Practice at the Philadelphia College of Pharmacy and Science.

WASHINGTON, DC

Steven R. Moore is now affiliated with the Division of Biopharmaceutics at the Food and Drug Administration, with primary responsibilities in the management and policy activities of the Division. Moore is also serving as Senior Advisor on Geriatric Drugs to the Office of Disease Prevention and Health Promotion, in the Department of Health and Human Services. Moore is a 1970 graduate of the School of Pharmacy and a 1978 graduate of the School of Public Health at the University of North Carolina.

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OTC Drug Use by Older Patients Requires Careful Monitoring

by Peter P. Lamy, Ph.D.

Older people frequently take over-the-counter (OTC) medications in addition to, or in lieu of, prescription drugs without consulting a physician or pharmacist. The misuse of otherwise therapeutic nonprescription drugs may harm the patient. Hence the pharmacist's role has expanded from formulating and dispensing drugs to actively alerting patients to the risk of uninformed self-medication.

All segments of the population use OTC medications liberally, but older people form the single largest consumer group for such products, particularly internal analgesics and antacids. OTC drug use should be recommended by the pharmacist with the same consideration and precautions given to prescription drugs.

Aspirin is the most commonly used OTC analgesic. Aspirin can reduce the increasing aches and pains commonly associated with aging, but chronic overuse can lead to toxicity characterized by confusion, irritability, tinnitus, vision disturbances, sweating, nausea, vomiting and diarrhea. Diagnosis of salicylate toxicity is frequently difficult because the physician, pharmacist and patient may blame the symptoms on old age.

In conjunction with certain prescription drugs, aspirin can have a negative effect. For example, the interaction of aspirin and anticoagulants can impair primary hemostasis or blood clotting, cause gastrointestinal bleeding and enhance the hypoprothrombinemic effect. Salicylate interactions with methotrexate can decrease both clearance of the drug and plasma protein binding, increasing the risk of methotrexate toxicity.

Greater awareness of aspirin's potential adverse effects has led to an increase in the use of acetaminophen. Available in a liquid dosage form, the drug may be more convenient for older persons. Acetaminophen has analgesic and antipyretic properties equal to aspirin and is a suitable replacement.

Chronic antacid use can lead to various adverse effects, including altered bowel habits, disturbance of acid-base balance and absorption of individual ions, such as aluminum or magnesium. Concurrent use of an antacid with another drug may impair the

absorption of the second medication. The interaction is in some, but not all cases, clinically important. Most OTC antacids contain a large amount of sugar per dose, often unbeknownst to the consumer, and this may lead to serious consequences in those patients with diabetes.

Optimum drug therapy can only be obtained with necessary communication between pharmacist, physician and patient. This necessity extends beyond the use of prescription to nonprescription drugs.

Peter P. Lamy, Ph.D. is Professor and Chairman of the Department of Pharmacy Practice and Administration Services, Center for the Study of Pharmacy and Therapeutics for the Elderly at the University of Maryland School of Pharmacy, Baltimore.



Lisa Stein

Lisa S. Stein has been assigned to the Asheville territory for The Upjohn Company. She recently completed initial training at The Upjohn Company Learning center in Kalamazoo, Michigan. This is part of an extensive training program for all new Upjohn sales representatives. Lisa is a graduate of East Tennessee State University.

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THIRD PARTY COMMITTEE REPORT

Presented at the 104th Annual Convention

April 8, 9 & 10, 1984, Chapel Hill

The NCPHA Third Party Committee (TP) discussed a range of issues relevant to our profession. These items included:

Third Party Legislation

Home Health Providership

Health Maintenance Organizations (HMOs)

Medicaid-Fee Reimbursement

— Copay

— Unit Dose Reimbursement

Third Party Legislation

It is apparent that no one is really sure as to the eventual outcome of legislation like the Georgia Third Party Act. The recent Federal Court ruling against Alabama's Third Party Legislation cited a U.S. Supreme Court ruling on June 24, 1983, which involved the Employee Retirement and Income Security Act (ERISA). Larry Braden, Executive Vice President of the Georgia Pharmaceutical Association and principal author of the Georgia Third Party Act, believes the Georgia Legislation will stand the ERISA challenge.

Due to the courtroom confusion and as a compromise, our committee would favor NCPHA to pursue legislation similar to the Georgia Third Party Act, however omission of the monetary aspect is suggested. Passage of a non-monetary version of the Georgia TP Act would benefit pharmacy and consumer, and be less difficult to enact. This act would require the State Insurance Commissioner to begin registration of Third Party administrators, establish that they are financially solvent, require them to post bond, and audit the plans they administer—making sure those plans comply with the law.

Home Health Ancillary Services

As pharmacists begin to expand their practices into the related areas of home health ancillary services, an increasing amount of reimbursement will be derived from Third Party insurance providers for both private policy holders and recipients of Medicare Part B benefits. Additionally, the

most common form of nursing care given patients at home is the administration of injectable drugs. Due to this rapidly expanding area of provider service in a TP heavy reimbursement sector, we must continue to stay abreast of developments in the reimbursement of these products.

HMOs

The recent influx of the HMO-HealthAmerica, into North Carolina raises the question of how these agencies will impact on pharmacy within our state. HealthAmerica has offered prescription drug reimbursement to NC pharmacists at a fee comparable to that of NC Medicaid. The future influx of HMOs into our state may result in reimbursement rates below NC Medicaid rates . . . therefore NCPHA must closely monitor these activities.

Medicaid

The TP Committee reviewed three major aspects of Medicaid reimbursement;

1. Fee Reimbursement

A suggested increase in the dispensing fee for prescription claims was voiced by each member. It was hoped that the amount of increase would be tagged to a percentage adjustment equal to the inevitable increase in teachers' salaries. However the recent call by the American Medical Association for a freeze on physicians' fees could have an adverse effect on our quest for this goal. NCPHA should also continue to hold the Division of Medical Assistance to the formula of cost-of-drug equals AWP for those drugs not covered by MAC and EAC restrictions. Cost-of-drug should not be decreased to acquisition cost.

2. Copay

Copay for prescription services continues to remain at the fifty cents/prescription claim—excluding those exemptions as mandated by Federal legislation. It is apparent that intense lobbying for the abolition of copay has been ineffective at

the Federal level of government. Pharmacists who have had problems in the collection of copay for prescriptions should document the recipients name and other pertinent data. This information should be forwarded to NCPHA.

3. Unit Dose Reimbursement

Heated discussions over the prospects for fair reimbursement of unit dose drugs resulted in no clear-cut decision on this issue. It was a consensus of the membership that an educational program on the subject should be presented to the total membership. Thereafter a poll of the membership would be taken on whether the association should press ahead on this issue.

CONCLUSIONS

The committee consensus of opinion regarding the above issues is contained herein;

1. NCPHA should introduce legislation similar to the Georgia Third Party Act,

omitting the provisions regarding reimbursement.

2. NCPHA should continue to remain abreast of Third Party reimbursement in regards to home health and HMOs.
3. NCPHA should seek an increase in the reimbursement for dispensing fees in the Medicaid drug program.
4. NCPHA should educate members and then poll them on the question whether adequate reimbursement for unit dose drugs should be sought.

COMMITTEE MEMBERS

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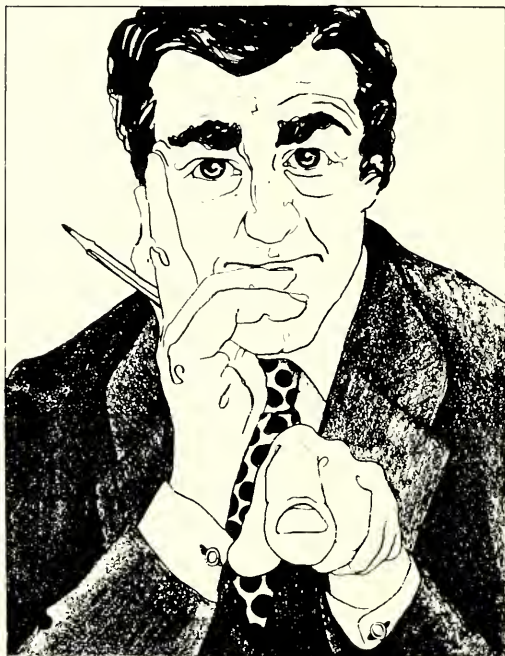
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WHAT NORTH CAROLINA PHARMACISTS THINK ABOUT MANDATORY CONTINUING EDUCATION

by Loni T. Garcia

With the January 1984 Newsletter, the North Carolina Board of Pharmacy included a post card (stamped and self addressed) that requested the pharmacists' opinion of requiring continuing education as a condition for license renewal. The pharmacists were asked to respond to the following question by indicating 'yes', 'no', or 'no opinion'. "Do you think the Board should require, as a condition for license renewal, that a pharmacist obtain continuing education from meetings, programs, conventions, correspondence courses and other similar activities?" They were also asked to offer any comments they felt were appropriate.

3955 cards were mailed out. By April 13, 1984, 2004 cards had been returned for a response rate of 50.7%. Even with the writing of this summary, cards continue to trickle in. 1100 pharmacists (54.9%) indicated that they were in favor of the Board requiring continuing education for license renewal. 858 pharmacists (42.8%) were opposed to requiring continuing education. 46 pharmacists (2.3%) indicated that they had no opinion or were undecided.

Additional comments were found on 982 of the returned cards (49.0%). Of those with comments, 581 (59.2%) had voted in favor of requiring continuing education, 381 (38.8%) had voted against the requirement, and 20 (2.0%) expressed no opinion. Numerous reasons were given for supporting continuing education as a condition for license renewal. These are summarized in Table 1. Over twice as many reasons were given for not requiring continuing education. These are summarized in Table 2. It is noteworthy that many pharmacists voted in favor of requiring continuing education but made negative comments about it. Others voted against requiring continuing education but commented about the benefit that could be derived from such a requirement. Thirty pharmacists indicated that continuing education is required for the renewal of their license in other states. Only four (13.3%) of these were opposed to North Carolina requiring continuing education for license renewal. Their comments are summarized in Table 3.

SUMMARY OF COMMENTS

Availability—The majority of the comments indicated a concern regarding the availability of continuing education opportunities. 158 pharmacists expressed concern about (1) the difficulty of getting time off to attend programs or (2) the lack of an adequate number of programs close to the pharmacist's home. Many pharmacists also expressed concern about the financial burden incurred to get relief help and the expense to register for and travel to programs. Twenty-seven pharmacists who voted 'no' stated that continuing education activities are too expensive. Eleven pharmacists felt that the employer should be encouraged or required to bear the expense of continuing education activities and provide the pharmacist time off (presumably with pay) to participate in continuing education activities. Variety in selection, i.e. content and format, was also identified as an important consideration.

One Man Store—Forty-two pharmacists expressed concern about the hardship requiring continuing education would present for the "one-man store." The greatest concern seemed to be the difficulty it would present for the pharmacist to leave the store for programs. It was a big enough concern that 25 (59.5%) voted 'no.' Fifteen (35.7%) still voted 'yes' and 2 (4.8%) did not feel strongly enough to vote 'yes' or 'no.'

Quality—The other major concern noted was the quality of the programs and/or the importance of establishing fair and reasonable guidelines. Thirty-two of the pharmacists indicated that fair and reasonable guidelines would need to be established and an attempt should be made to make available quality programs.

Format/Type—Many pharmacists made specific recommendations regarding continuing education. Thirty seven pharmacists encouraged the acceptance of correspondence-type continuing education. Four pharmacists did not think correspondence courses should be accepted; and ten felt only a portion of the total hours should be obtained by corres-

pondence. Several pharmacists recommended cassette and video taped programs as an alternative to program/meeting attendance. A few pharmacists suggested that courses taken in community colleges or at universities in pursuit of an advanced degree should be included. Others recommended that conversations with manufacturer service representatives or physicians should count towards the total hours required for relicensure. Still others recommended giving credit for membership in pharmacy associations and involvement in community projects. Continuing education programs/activities accepted by other health professions (Medical, Dental, Nursing) were also recommended for inclusion.

Subject Content—Twenty seven pharmacists felt that there should be no restriction as to the subject content of the continuing education activities. Topics that were recommended are summarized in Table 4. Eleven pharmacists felt that the continuing education experience should count toward an advanced degree. Ten pharmacists indicated that acceptable courses should be offered at the Area Health Education Centers or in regional meetings.

Exemptions—There were several recommendations regarding who should or should not be exempt from continuing education requirements. Five pharmacists felt that only non-practicing pharmacists should be required to obtain continuing education for

relicensure. Four pharmacists felt that pharmacists over 65 years of age should be exempt. Four pharmacists felt that a temporary waiver should be allowed in extenuating circumstances. The extenuating circumstances identified were physical disability or health reasons and military service overseas. Other comments included recommendations to require less hours of part-time and semi-retired pharmacists, that continuing education should not be required of pharmacists until they have been out of school for two years and to exempt out-of-state licensees, non-working licensees and part-time pharmacists.

SUMMARY AND CONCLUSIONS

It is evident that the majority of the pharmacists licensed in this state who feel strongly about requiring continuing education are in favor of it as a condition for license renewal. If the availability of adequate continuing education activities is enhanced, the major opposition to mandatory continuing education can be overcome. Serious consideration should be given to accepting activities that do not require travel. Providers of continuing education should take into consideration the subject content recommended in this survey when planning future programs. They should also attempt to expand the availability of program sites to include cities other than Chapel Hill or those with Area Health Education Centers.

TABLE 4
RECOMMENDED TOPICS

Laws and regulations	6
New Products	5
Disease states	4
Therapy related	4
Drug use	3
Computerization	3
Clinical	3
Broad spectrum	3
Business and finance	3
Applicable to daily practice	2
Scientific	1
Pharmacology	1
Not just hospital related	1
Regulatory groups—FDA, DEA, NCBP, NABP	1
OTC drugs	1
Professional responsibilities	1

(Continued on page 28)

TABLE 1
REASONS FOR REQUIRING CONTINUING EDUCATION

	<i>yes</i>	<i>no</i>	<i>no opinion</i>
Because medicine and pharmacy is constantly changing	71	4	
Good way to encourage all pharmacists to stay up to date	48		
Will upgrade/maintain the quality of the profession (Will be more prepared to handle 3rd class of drugs/Rx to OTC switch)	26		
Will lend credence to our position of authority on drug distribution and dispensing and/or will protect the public	18		
Because many/some won't do it on their own	10		
Good idea to mandate what we should be doing voluntarily but let slide because we are too busy	9		
Must stay on level with nursing and other paramedical professions	8		
Essential to continuance of pharmacy as a profession; is a standard of professionalism	7		
Those who don't keep up hurt the profession and/or their patrons	7		
Doesn't insure competency but does help	7		
Would keep pharmacists more up to date	7		
Essential/by all means/excellent idea	5		
The only practical way to insure competence	2		
Social contact and thus exchange of ideas	2		
Will prevent education gaps and different levels of competence	2		
No system will be perfect but some benefit would come	2		
Would benefit the association(s)	2		
Only way to go	1		
We old pharmacists especially need to be brought up to date	1		
Minimum standard of excellence is desired by every profession and is expected by the public	1		
Good for the pharmacist	1		
Just a necessary advantage	1		
Reassessment differentiates us from technicians	1		
Very useful	1		
Basically a good idea	1		
Evolution only occurs under pressure	1		

TABLE 2
REASONS FOR NOT REQUIRING CONTINUING EDUCATION

	<i>yes</i>	<i>no</i>	<i>no opinion</i>
Can keep up adequately from:			
pharmacy journals		11	
manufacturer service representatives		12	
reading		4	
working		22	1
package inserts		2	
board and association newsletters		1	
Too much of a hardship/burden on pharmacist		37	2
Too expensive		27	
Material not relevant to actual practice		21	1
Additional burden to over controlled profession		20	
Most people already to it		17	
Can't make someone learn		13	
No advantage/not necessary/no benefit		11	
Won't improve the average pharmacists knowledge or performance		10	
Those in opposition won't benefit anyway		9	2
As professional each pharmacist is personally required to maintain his continuing education		7	

Too much of a burden on the Board; Better ways to spend Board money; Board already knows who doesn't keep up	7
"Others" don't require it/Not until they do	
"groups"	3
"professions"	1
"health professions"	3
Profession is demanding enough without additional regulations	6
Allow market to eliminate those who fail to keep abreast	6
Lack of success in states with mandatory continuing education	6
Already educated beyond my clinical involvement/Only have time to pour and count	6
Is demeaning; assumes pharmacist can't do it on his own	4
No suitable vehicle for all pharmacists to utilize	3
There are extenuating circumstances that would prevent participation in programs or courses	3
Any evidence that it's needed or will work?	3
There is a world of knowledge if one will just commit to studying	3
Is only a way to create a source of income and easy lifestyle for elitist, non-working pharmacy organization leaders	3
North Carolina is one of the toughest states on licensure and further education is not necessary	2
Why change the current system that works?	2
Not useful unless test too	2
Those wishing to excel are keeping abreast	2
Shouldn't take license over continuing education—only for violation of law	2
Courses are only a review of what you already know and practice	2
Do other health professions require it?	2
Will cause many to turn in license	1
Should not have to continue education on someone else's terms	1
Only benefits educational association	1
Customer only wants low prices	1
Doctors don't want pharmacist's opinion	1
Won't help the profession	1
Already do more paperwork than fill prescriptions	1
Incompetent pharmacist weed selves out	1
How are you going to wring ten more hours out of a person	1
Will increase cost to consumer	1
Most do it already and majority should not be required to do this for the few who need it	1
Professionals will maintain, Board should remove those who are incompetent	1
Can't operate without being current	1
Too much red tape	1
Not enough continuing education courses are available	1
Keeping up is requirement of a job, not a license	1
Public doesn't benefit from a walking authority on drugs	1
My standards would be no higher	1
Will worsen the shortage of pharmacists	1
Pharmacist is considered a professional by no one but himself	1
No practical way to monitor quality	1
Not until salaries increase with the gain in knowledge and experience	1
Not until actual practice comes out of the five and dime store image and develops strong professional attitude and organization	1
Should be required to those disciplined by the Board	1
Treat us like professionals and we'll act like professionals	1
Options may start out broad, but will narrow excessively in a short time making it merely an exercise in academia	1

(Continued on page 30)

TABLE 3
COMMENTS FROM RESPONDENTS LICENSED IN OTHER
STATES THAT REQUIRE CONTINUING EDUCATION

Florida (15 h/yr)

Keeps me in touch with various topics, which I would otherwise neglect

Should require 15 to 20 hours per year

Alabama (15 h/yr)

Makes me seek articles to read for continuing education; requires me to have at least two hours of live exposure

Has kept me brushed up on practice (also licensed in Florida)

Colorado

Hi percentage leave as soon as they can slip out

Ohio

More knowledgeable, clinically oriented professionals and increased standards of practice

Has helped me to retain information which I otherwise would have forgotten. Through judicious selection can review areas relevant to one's practice site. Can be used as a tool to remain abreast of new developments in the profession

Don't like being told what to do (voted 'no')

Kentucky (15 h/yr)

Not a problem, not prohibitively expensive, some personal value

Been doing it for several years, is worthwhile

Have made more of an effort to read and keep up; would probably not do it otherwise

State Unknown (15 h/yr)

Very beneficial, especially correspondence and meetings

Has improved pharmacy there

Michigan

Am more up to date and aware of new therapies

State Unknown, # hours required unknown

Am impressed with the availability of continuing education here

Education helps keep me abreast

Meetings and conventions are social events; correspondence may be okay (voted 'no')

Programs are interesting but so in depth there is little to recall after the program; hard to get off work (voted 'no')

Indiana

Don't need it if you are working (voted 'no')

New Jersey

Most attended merely to get credits and weren't really interested (voted 'no')

REPORT OF THE COMMITTEE ON WOMEN IN PHARMACY

*Presented at the 104th Annual Convention
April 8, 9 & 10, 1984, Chapel Hill*

The Women in Pharmacy Committee of the NCPHA has met three times this session, and a fourth meeting is planned for April 8, 1984. Our first meeting was held November 20, 1983 at the Institute of Pharmacy with five committee members and our advisor, Jack Watts, attending. At this time, we reviewed the goals of our earlier meetings with emphasis on the Task Force on Women of the NCPHA recommendations and the need for a study of women's issues. The following statistics were presented: of the 4,839 pharmacists licensed in North Carolina, 72% are male, 28% female. However, in 1983, 52% of the new licenses granted were to females, and 61% of the pharmacy students are female. Each year 50-75% of the new NCPHA members are female.

Further discussion included addressing comments received by Jack Watts on the problems some students have with interview situations. This led the Committee to develop a workshop on this topic for the Convention in April. It was felt that this was an area that would be of interest to people in all aspects of the profession and would encourage student participation.

Continuing discussion led the Committee to pursue a nationally known speaker for the Convention who would present topics addressed to women in pharmacy, but who would also speak to the profession as a whole. We are pleased to present Charma Konnor of the FDA as this speaker.

Meetings on January 6, 1984 with eight members attending in Winston-Salem and on March 11, 1984 in Greensboro with four members attending, were basically planning sessions for the convention activities and the meeting in April for the planning of the previously mentioned survey.

The current objectives and recommendations of this committee are:

1. A recommendation to the State Board of Pharmacy that CE be a mandatory requirement for relicensure in North Carolina.
2. That a regular survey be conducted by this Committee, or in conjunction with

other surveys already being done within the School of Pharmacy, that will determine the particular needs of women pharmacists to be addressed by this Committee.

3. To find a way of offering to male spouses the diversity of activities provided for women by the Women's Auxiliary at convention time.
4. To encourage participation of women in the state legislative activities.
5. To encourage and find mentors for women wishing to be active within the governing bodies of the NCPHA and the State Board of Pharmacy.
6. To have one or more men as members of the Committee, and that one or more persons serve consecutively for continuity.
7. To support women in pharmacy as part of the profession as a whole, and not as a separate entity, yet recognizing those problems unique to women (and frequently to all entry-level professionals), and to fully utilize their resources for the betterment of our profession.

The members of this committee are outstanding in their interest and knowledge and have made this a most productive year. Thank you. I would also extend thanks to the women of Lambda Chapter of Kappa Epsilon for their promotion of our convention programs within the School of Pharmacy.

APHA TASK FORCE RECOMMENDATIONS

At its Annual Meeting on March 29, 1981, the A.Ph.A. accepted a report of the Task Force on Women in Pharmacy. The Task Force Committee included Estelle Cohen, the Consumer member on the Maryland Board of Pharmacy. A copy of the complete report is available from the Association office. The major recommendations of the report are summarized below.

1. An Office of Women's Affairs should be established by APHA.

(Continued on page 32)

WOMEN IN PHARMACY

2. The profession of pharmacy must develop a mechanism for gathering and reporting annual manpower data on practicing pharmacists.

3. Women pharmacists should insist they be paid equally with men for equal work and responsibility, and men pharmacists must encourage and support this expectation.

4. State pharmacy organizations should make a long-term commitment to getting women pharmacists actively involved in their committees and to ensuring that women pharmacists are encouraged to seek out elected offices and other leadership positions.

5. Each state association should give strong consideration to forming its own task force on women in pharmacy with representation of both men and women pharmacists.

6. Qualified women pharmacists should be encouraged to seek out ownership or management positions in their practice environments so they can be more influential in determining the future standards of pharmacy practice.

7. Efforts should be made to encourage more women pharmacy graduates to continue their education in graduate or advanced professional degree programs.

8. Efforts should be made to encourage more women pharmacy graduates to pursue careers in pharmacy education as tenure track faculty members in the clinical, administrative and basic science areas.

9. Representatives from the pharmaceutical industry must take the initiative to make pharmacy school faculty more aware of the expanded career opportunities that are available to pharmacy school graduates. Likewise, pharmacy school faculty, through an active career counseling program, must take the initiative to make students aware of these opportunities.

10. Schools of pharmacy should take a serious look at the nature and extent of career guidance they make available to their students and take steps that ensure their faculties are accurately informed about the career options open to a pharmacy school graduate. Guidance in career preparation should be an ongoing component of a school's counseling program.

11. Recruitment materials for the profession should be updated to stress a more career-oriented role for women and to minimize the

focus on opportunities for part-time employment.

12. Advertisements via any media in which a pharmacist is presented or depicted should use a woman on a regular basis to represent the pharmacist.

COMMITTEE MEMBERS

Laura G. Burnham, Winston-Salem
—Chairman

Priscilla C. Brown, Germanton

Kathy Edwards, Raleigh

Mary S. Lee, Silver Springs, MD

June H. McDermott, Chapel Hill

Jack G. Watts, Burlington—Advisor

Elizabeth L. Ayers, Winston-Salem

Kathy M. D'Achille, Clemmons

Nancy R. Hardie, Winston-Salem

Marilyn A. McConnell, Greensboro

Ruth Mitchem, Lexington

Judith W. Wohlar, Charlotte



Ron Vaughn (right), Roche Professional Products Representative recently presented a One Million Prescription Award Plaque to Richard Cardin, R.P. of Almand's Discount Drugs, Rocky Mount, North Carolina.

Roche Laboratories, honored the pharmacy with the commemorative plaque for serving the community for over 40 years with prescription products and for dispensing over one million prescriptions.

YARBOROUGH HONORED *TWICE* FOR PATIENT EDUCATION

Peggy Yarborough, Cary has been honored twice by national organizations for her efforts in patient education in the area of diabetes.

The American Diabetes Association named Yarborough the Outstanding Health Professional Educator in the field of diabetes in 1984. She is the first pharmacist to win this award, the *Ames Award*, created by the Ames Division of Miles Laboratories. The presentation was made in Las Vegas in June at the Association's annual meeting.

Mrs. Yarborough was also recognized by being selected as the 1984 Patient Care Award recipient for excellence in patient education by a community pharmacist. The presentation and announcement was made at the Seventh Annual Conference on Patient Education in the Primary Care Setting in September, in Kansas City. The award is sponsored by the Family Practice Residency and the Research and Development Center at St. Mary's Hospital, in Kansas City. Mrs. Yarborough is the first recipient of this award

and was cited for emphasizing patient education, and in particular, diabetic patient education during her professional career.


Peggy is a 1966 graduate of the University of North Carolina School of Pharmacy. She received her M.S. from UNC in 1978.

In 1976, she received the North Carolina Society of Hospital Pharmacists Achievement Award and was named the Hospital Pharmacist of the Year.

Peggy and her husband, Frank, operate the Medicine Shoppe in Raleigh and Peggy also works at her new facility, *Diabetic Care Center* in Cary. She has written many articles for journals and periodicals, including *Clinical Pharmacy Handbook*, *Diabetes Forecast*, and *Diabetes Care*. She has served on several regional, local and national advisory board and committees and is a past president of the Western Triangle Diabetes Association and the Triangle Diabetes Association. She is also a member of the Board of Directors of the North Carolina Diabetes Association, and was recently elected Vice President of that association.



Peggy Yarborough and her patient information center.



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MARRIAGES

EDNARUTH MANNING and Russell Neill Hadley, both of Raleigh were married Saturday, October 27th in Hillyer Memorial Christian Church.

The bride, a graduate of the University of North Carolina School of Pharmacy is employed as a pharmacist at Medi-Save Pharmacy in Raleigh.

The groom, also a UNC graduate is an insurance agent for Shenandoah Life Insurance Co. They will live in Raleigh.

PHARMACISTS

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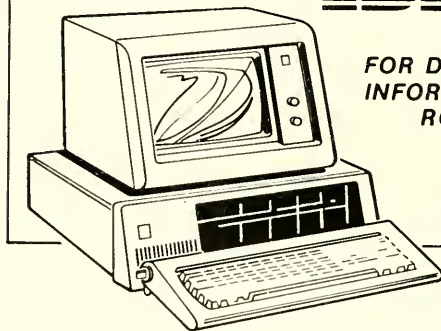


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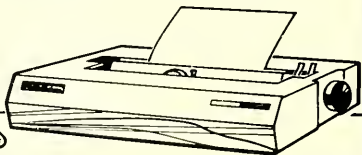


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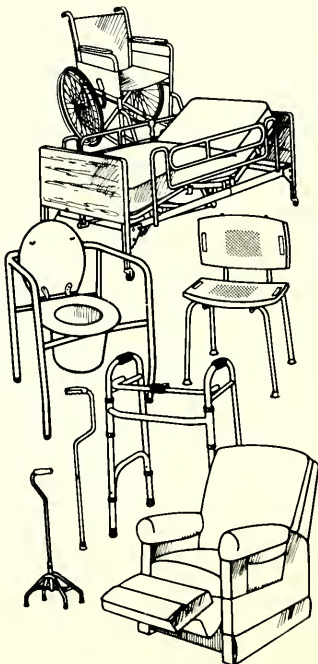
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THOMAS REEVES BURGISS HONORED AS 1984 PHARMACIST OF THE YEAR

Over two hundred colleagues, friends, neighbors and relatives met in Alleghany County, Saturday, July 14, 1984 to recognize Thomas Reeves Burgiss, Sparta, as 1984 North Carolina Pharmaceutical Association Pharmacist-of-the-Year.

The Mortar-and-Pestle Award is given annually to that pharmacist selected by the NCPHA for outstanding service to Pharmacy and his community over many years. Burgiss is the owner of DrugCare of Alleghany, in Sparta, and has interests in other pharmacies across the state. He is also chief pharmacist and consultant to the Alleghany County Memorial Hospital and is Chairman of the Morehead Scholarship Board of the county. Among the awards he has received are the A. H. Robins Bowl of Hygeia, Syntex Practitioner Instructor of the Year, the UNC School of Pharmacy Distinguished Service Award, and the Pfizer, Inc. Community Pharmacy Service Award. Burgiss is married to the former Nancy Waddell and they have three sons, Tim, Brant and John.

The Mortar-and-Pestle Award was presented to Burgiss by the immediate past president of the NCPHA, David D. Claytor, Greensboro, during the program held in the Glade Valley School Auditorium. Tributes to Burgiss were given by Lewis M. Ferguson, Taylorsville, a fellow pharmacist and UNC classmate, Georgeanne Sebastian, Madison, Wisconsin, also a pharmacist and one of Burgiss' interns, Fred G. Eidson, a friend and neighbor from Elkin, and W. J. Smith, Chapel Hill, former executive director of the NCPHA, who served under Roy Burgiss, father of the recipient in 1947-48.

The traditional Award Dinner was held on the grounds of Glade Valley, under a tent and the beautiful mountain sky . . . food was prepared in the Marion's Country Ham House Restaurant. Diners were bused up the mountain from the parking area to the restaurant and back down to the auditorium. The weather gods were cooperative.

NCPHA President W. Artemus West, Roseboro, was Master of Ceremonies for the program. John H. Miller, Mayor of Sparta, welcomed the out of town guests and gave a brief history of the region. Lewis Ferguson told of his early experiences with Burgiss, their days in college, Tom's positive outlooks, and tales of young men down from the mountains. Miss Sebastian related her impressions of Burgiss from her perspective as an intern. His "trial by fire" teaching methods, exposure to the real world of Pharmacy, a role model for patient education, his enthusiasm for Pharmacy, delegation of authority all made the rotation experience unique and valuable.

Fred Eidson, next door neighbor when Burgiss lived in Elkin, called him a catalyst, something that makes things happen but remains basically unchanged. He commented that Burgiss could not stand still when he thought something needed to be done in the community. Mr. Smith said both Tom and his father Roy were shining stars in the pharmacy sky of Western North Carolina. Smith served as executive director of the NCPHA when Tom was president in 1976 and when Roy was president in 1947-48.

David Claytor prior to presenting the Award, remarked that Burgiss had served as preceptor for over fifty students since the internship program was established, and introduced those students in the audience. On accepting the award, Burgiss thanked Ferguson for helping him through chemistry, thanked Fred's wife Jane for her iced tea recipe, thanked Georgeanne for representing the female segment of the profession, thanked W. J. and Vivian for being a part of his family. He thanked his employees for their help and support and his wife Nancy and his sons for their help and love. He thanked his mother for his heritage and for being a sparkplug for the family. After the program, Tom and Nancy hosted a reception at their home in Laurel Springs. Hardly a person was lost in the journey from Glade Valley to Laurel Springs.



Tom Burgiss, 1984 Pharmacist of the Year, flanked by his mother and wife Nancy. Photo by Colorcraft



Comments by Tom Burgiss, while NCPHA President Teamie West looks on. Photo by Colorcraft



Elegant dining in the mountains. The Mortar and Pestle Award Dinner. Photo by Colorcraft

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PROPOSED CONSTITUTION OF THE NORTH CAROLINA PHARMACEUTICAL ASSOCIATION

This proposed Constitution was presented on the Third Business Session of the 104th Annual Convention, held in Chapel Hill, on Tuesday, April 10. It is now eligible for final action at this year's Convention, and will be presented at the Third Business Session, Friday afternoon, April 1.

Article I—Name

This Association shall be called "The North Carolina Pharmaceutical Association" with an office at the Institute of Pharmacy, Chapel Hill, N.C. 27514.

Article II—Purpose and Objectives

Section 1. Purpose: The purpose of this Association shall be to protect the public health and welfare by uniting North Carolina pharmacists for the advancement of their profession.

Section 2. Objectives: The objectives of this Association shall be:

- (1) To improve the science and art of pharmacy and to elevate its standards.
- (2) To promote the safe, effective, and rational use of medications, therapeutic agents and medical devices issued or dispensed by pharmacists for the prevention of illness, treatment of a medical condition or maintenance of health.
- (3) To encourage and promote the research and study of problems related to the practice of pharmacy.
- (4) To interest competent individuals in the practice of pharmacy as a career.
- (5) To promote pharmaceutical education and professional growth as a means of providing the greatest protection for the public at large.
- (6) To encourage the study of pharmacy through scholarships.
- (7) To provide services to members of the Association.
- (8) To secure and distribute to members of the Association information relevant to the practice of pharmacy.
- (9) To adopt and enforce a Code of Professional Ethics that will assure the public of high standards of professional practice.
- (10) To assist members of the Association in

achieving economic, educational, governmental, and professional goals.

- (11) To promote and encourage goodwill and respect between pharmacists and other health professionals.

Article III—Code of Professional Ethics

Section 1. Code of Professional Ethics:

The Association shall adopt a Code of Professional Ethics, the purpose of which is to elevate the standards of the professional practice of pharmacy and serve as a guide for the conduct and application of professional judgment by pharmacy practitioners. All applicants for active membership shall subscribe to the Association's Code of Professional Ethics and continue to do so upon renewal of membership.

Section 2. Ethics, Grievance and Practice

Committee: The Ethics, Grievance and Practice Committee is the judicial division of the Association and shall be composed of five members appointed annually by the President. It shall be the primary responsibility of the Ethics, Grievance and Practice Committee to develop written criteria for membership and interpret and enforce the Association's Code of Professional Ethics according to the provisions of the Bylaws and procedures duly adopted by the Committee. The Committee shall also serve to advance the practice standards of the profession of pharmacy.

Section 3. Procedures, Penalties and Appeal:

An active member may be reprimanded, suspended or expelled from membership for violation of the obligations of the Code of Professional Ethics. An active member against whom a complaint for violation of the Code of Professional Ethics has been received shall be provided written notice of the charges and an opportunity for a judicial review or hearing by the Ethics, Grievance and Practice Committee accord-

(continued on page 9)

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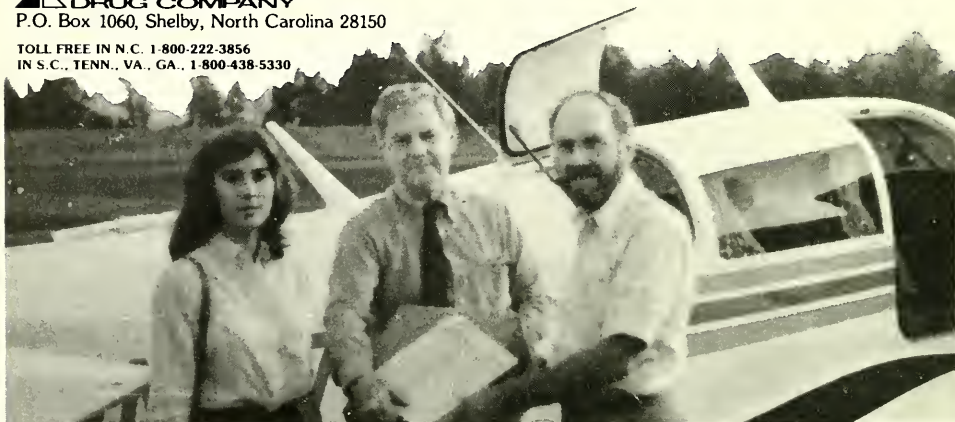
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PROPOSED CONSTITUTION

ing to established due process procedures. All decisions of the Ethics, Grievance and Practice Committee shall be final unless appealed to the Executive Committee within sixty (60) days from the date on which the member received notification of the decision by the Ethics, Grievance and Practice Committee. The majority decision of the Executive Committee of cases on appeal shall be final and binding.

Article IV—Membership

This Association shall consist of Active, Life, Student, and Honorary Members.

Section 1. Active Members: An active member is a pharmacist licensed to practice pharmacy under the pharmacy laws of this state or a graduate of an accredited School of Pharmacy who has paid the annual dues and satisfies written criteria developed by the Ethics, Grievance and Practice Committee.

Section 2. Life Members: A life member is an active member who has paid ten times the amount of the annual dues or who has been voted into *Life Membership* by the *Executive Committee*.

Section 3. Student Members: A student enrolled in a School of Pharmacy within this state is eligible for membership as a student member of the North Carolina Pharmaceutical Association at the annual membership fee established by the Executive Committee of this Association. A student member is not eligible to vote or hold office in the Association, but is entitled to all other rights of membership.

Section 4. Honorary Members: Any person who has achieved exemplary distinction in or for pharmacy or the health sciences may upon nomination by the Executive Committee be elected an honorary member. Honorary members shall not have the right to vote or hold office in the Association but may attend meetings of the Association. They shall be exempt from payment of annual dues.

Article V—Officers

The Association shall have the following

officers: a President, a First Vice-President who shall be President-Elect; a Second Vice-President; a Third Vice-President; and an Executive Director.

Section 1. Election Process: The three Vice-Presidents shall be elected annually by mail ballot and shall hold office until their successors are elected and installed. The First Vice-President (President-Elect) shall automatically assume the office of President without being subject to further election.

Article VI—Amending the Constitution

Every proposition to alter or amend this Constitution shall be submitted in writing to the Constitution and Bylaws Committee and, if accepted, referred to the Executive Committee who shall submit it in writing at an annual meeting. It shall be acted upon at the next annual meeting when upon receiving a vote of three-fourths of the members present, it shall become a part of the Constitution of the North Carolina Pharmaceutical Association.

MEDICAID EXPANSION

In January 1985, the North Carolina Medicaid Program will make health care more accessible to nearly 60,000 additional poor children and pregnant women. Program expansion to meet the health care needs of these new eligibles was approved by the General Assembly in the 1984 legislative session.

For the first time in the fifteen year history of the state's Medicaid program, children who live in two-parent households, and married pregnant women may qualify for Medicaid if they meet the state's medically needy income standards and asset limits. These standards are based on family size.

The monthly income standard for a family of four is \$333. If the family's income exceeds the standard, the children may still qualify if the family has high medical bills to offset their income above the standard. The asset limit is \$2450 for a family of four.

More information and applications for Medicaid are available at the County Department of Social Services.

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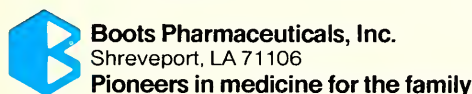
Check with your wholesaler for your exact savings; but here are some typical examples.

Product	Size	A.W.P.—Rufen Direct Cost—Motrin	Savings
RUFEN 600 mg MOTRIN 600 mg	500 500	\$ 67.20 \$ 94.00	\$26.80 (29%)
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RUFEN 400 mg MOTRIN 400 mg	500 500	\$ 48.00 \$ 66.00	\$18.00 (27%)
RUFEN 400 mg MOTRIN 400 mg	100 100	\$ 10.80 \$ 13.85	\$ 3.05 (22%)

*MOTRIN[®] (ibuprofen) is a registered trademark of The Upjohn Manufacturing Company M, Barceloneta, Puerto Rico 00617.
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** Redbook, August 1984.

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NATIONAL SYMPOSIUM ON THIRD-PARTY

The National Symposium to develop the pharmacy strategy for the "Challenge Of The 80s In Third-Party Pharmacy Programs" is being sponsored April 24-25 in Chicago, Illinois.

This National Symposium, designed expressly for practicing pharmacists, is being sponsored by the National Council of State Pharmaceutical Association Executives (NCSPEA). Serving as program chairman is Louis Sesti of Michigan.

This National Symposium is a first in American pharmacy to identify a pharmacy initiative regarding third-party . . . one which focuses on coordinated action rather than spontaneous reaction. This also is the first leadership-type program to plan strategies which invites practicing pharmacists to be directly involved in the process.

The National Symposium will feature keynote speakers on such critical subjects as:

- The Forces of Change in this Health Care Revolution
- Moving from a defensive attitude to an offensive game plan during times of opportunity
- Behind-the-scene in the bargaining process

The National Symposium will also feature a Wednesday evening session on pharmacy inspections and current events. Thursday will be dedicated to special case study presentations of new programs being initiated across the country. It will conclude with the input of participating pharmacists to establish the national agenda.

Early pre-registration is suggested in the event attendance must be limited so that nationwide distribution is assured. The program is scheduled to begin at 1:00 p.m. on April 24 and adjourn by 3:00 p.m. the next day.

To pre-register send your name, address, city and state with a check or money order for

(Continued on page 15)

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Greenville, NC 27834
Mark S. Reinhard, Ph-Mgr.

Issued 11/5/84 L.S.P.

Cabarrus County Health Department
East C Street
Kannapolis, NC 28081
Jerry Allen Bridgers, Ph-Mgr.

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Revco Discount Drug Center
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Brevard, NC 28712
Arthur V. Simpson, Ph-Mgr.

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Randy Gray Ball, Ph-Mgr.

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NATIONAL SYMPOSIUM

(Continued from page 12)

\$50.00 per person to National Symposium: 156 East Market Street, Suite 900, Indianapolis, Indiana 46204. (The registration fee after March 1 is \$75.00 and attendance cannot be guaranteed if received thereafter.) Your pre-registration will be confirmed and you will be mailed advance information about the Symposium program.

P.S. The Symposium will be held in the Westin-O'Hare Hotel, 5 minutes from the Airport. Specific details and Room reservation information will be mailed with the *Symposium Registration Confirmation* information. 10 hours of Continuing Education credit has been applied for—for each pharmacist participant.

DRUGGIST, MAY I SHAKE YOUR HAND

Reprinted, with permission, from Paul Harvey News and Comments, broadcast Saturday, October 20, 1984. Thanks . . . Paul Harvey.

Druggist, may I shake your hand.

We who remember you from the days when the corner drugstore was a schoolboy soda-jerk who knew everybody and in the background a friendly father-figure druggist who seemed to know everything about everything . . .

We who remember that fragrant apothecary of earlier years are aware that much has changed.

Now you are recognized as a "pharmacist."

Today there are as many women as men enrolled in colleges of pharmacy.

Today the corner drugstore is expected also to dispense alarm clocks and umbrellas and cameras and pocket calculators.

And may not even have a soda fountain anymore.

But with all the change, for better or worse, you have not changed.

Recently, boning up to speak to your National Association of Retail Druggists I was re-reminded that no profession has demonstrated more self-discipline than yours.

Public opinion surveyors recent years have asked, which secular professional does the public trust most?

Year after year the answer comes back the same: the pharmacist.

A professional observer is in awe of a reputation like that.

I have watched you wrestle the government out of authority over your paperwork, then saw you turn right around and—voluntarily, with your PILL PROGRAM—discharge that responsibility on your own and at your own expense.

With a decade of diligence your Association sought and got federal intervention in the frightful escalation of drug-related robberies.

And, on that subject, no profession more than yours is exposed to a vast inventory of open bottles of narcotics—yet while other health care professionals succumb to temptation with embarrassing frequency, you almost never!

Your Government has not always played fair. Even now, Uncle Sam diverts tax dollars to subsidize mail-order distribution of V.A. drugs.

Government clinics establish socialist pharmacies in unfair competition with your kind.

Government, too casually, places what have been prescription drugs in public vending machines. At least one asthma inhalant already indicts that practice.

Yet, for all the threats to and intrusion upon the neighborhood drugstore, it is still there.

The "friendly druggist" still is.

With diagnostic medicine increasingly impersonal, we would all be "numbers" instead of "names" . . .

Except for you.

That's all. I just wanted to drop by between hurts and shake your hand.

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An introduction of a new product? Yes, but not just "show and tell"; rather, details about how the manufacturer plans to promote this new product, information about couponing, advertising and sampling. And, details about where this new item should be placed in your merchandise set so that it sells and sells well!

This kind of information and service is what our Merchandising Specialists are all about. Not just an order taker and shelf duster; but someone who can give you meaningful consultation and information about your business. And in the usual Lawrence style, all of this service at no cost to you.

For further information about our Merchandising services, contact Robert Clift.

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PROPOSED BYLAWS of the NORTH CAROLINA PHARMACEUTICAL ASSOCIATION

This proposed Bylaws will be presented at the FIRST Business Session of the Annual Convention, Thursday morning, April 11, 1985, at the North Raleigh Hilton for comments and possible revision, and will be eligible for final action at the THIRD Business Session, Friday afternoon. Please examine this document carefully and send any suggested changes or corrections to Jean Paul Gagnon, Chairman Ad Hoc Committee, UNC School of Pharmacy, Beard Hall, Chapel Hill, or to the NCPHA Central Office.

Article I—Election of Officers

Section 1. A nominating Committee of seven members shall be annually chosen by the President and charged with the duty of selecting candidates for the offices of first, second, and third vice-presidents, and three members-at-large of the Executive Committee of the North Carolina Pharmaceutical Association; and four Directors of the Pharmacy Foundation of North Carolina, Incorporated.

Section 2. The Nominating Committee shall submit at the last session of each annual meeting for approval a slate of two or more candidates together with written biographical sketches for each of the offices of First Vice-President (President-Elect), Second Vice-President, Third Vice-President; six members for three places as members-at-large of the Executive Committee; and eight or more members as candidates for four directorships of the Pharmacy Foundation of North Carolina, Incorporated. Additional nominations with written biographical sketches can be made from the floor.

Section 3. The names of the candidates so nominated shall be residents of North Carolina and shall be submitted by the Executive Director by mail to every member of the Association within one month after he receives them, together with the request that the members indicate their preference on a ballot enclosed for that purpose, and return the same by mail within one month.

The ballots received as indicated in the preceding paragraph are to be sent to an "Election Committee" in care of the Executive Director, Chapel Hill. The Election Committee shall consist of four members selected by the Executive Committee of the North Carolina Pharmaceutical Association

for a term of three years. The Election Committee shall count as votes in the annual election only those ballots received from members whose dues have been paid for the current year. The Election Committee shall certify to the Executive Director the results of the tally after which the latter shall be published.

The Executive Director shall notify all candidates of the time and place of the meeting of the Election Committee and extend a written invitation to attend the counting of the ballots.

Section 4. The officers thus elected by a plurality of the votes shall be installed at the final session of the next annual meeting.

Article II—Duties of Officers

Section 1. THE PRESIDENT

The President shall:

- (1) Preside at all meetings of the Association;
- (2) Enforce the Constitution and Bylaws and parliamentary procedures in accordance with Robert's Revised Rules of Order;
- (3) Appoint all committees not otherwise provided for or ordered by the Association;
- (4) Be an ex-officio member of all committees and delegations;
- (5) Fill by appointment all committee and office vacancies brought about by death or inability to serve except as otherwise provided in the Bylaws.
- (6) Be Chairman of the Executive Committee;
- (7) Call special meetings at the written request of ten percent of the active members;

(Continued on page 18)

BYLAWS

- (8) Present a report on the affairs of the Association at each annual meeting;
- (9) Appoint a parliamentarian to serve at the annual or special meetings of the Association;
- (10) Perform such duties as pertain to this office.

Section 2. THE VICE-PRESIDENTS

- (1) The Association shall have three Vice-Presidents. The First Vice-President shall be the President-Elect of the Association and in the absence of the President, shall perform the duties of that office. If the office of President shall be vacated for any reason, the First Vice-President shall become the President of the Association for the unexpired term of the elected President and shall continue to serve a regular term as President.
- (2) In the absence of the President, the First, Second, or Third Vice-President, in that order, shall preside at meetings of the Association and of the Executive Committee.
- (3) The offices of the President-Elect, Second, and Third Vice-Presidents are filled by written ballot. In the event that these offices are vacated for any reason, such offices may be filled only by special election.

Section 3. THE EXECUTIVE DIRECTOR.

The Executive Director shall:

- (1) Serve as Secretary-Treasurer of the Association;
- (2) Keep and maintain all records of the Association, including proceedings and all membership records;
- (3) Collect monies due the Association and shall deposit monies in such depositories as the Executive Committee shall designate;
- (4) Conduct the official correspondence of the Association and notify each member by mail of the meetings;
- (5) Make disbursements as directed or outlined by the Executive Committee;
- (6) Preserve all papers and archives of the Association;
- (7) Edit and distribute the official publica-

tion of the Association, the Carolina Journal of Pharmacy;

- (8) Act as secretary to all committees of the Association;
- (9) Have the authority to employ the appropriate individuals to aid in conducting the affairs of the Association;
- (10) Discharge such other duties as the Executive Committee shall assign or designate.

The Executive Director shall be bonded in an amount required by law and approved by the Executive Committee, said bond to be paid by the Association. His performance and compensation shall be reviewed annually by the Executive Committee. A certified public accountant shall be engaged to audit the financial accounts of the Association and report to the Executive Committee.

Article III—Committees

Section 1. Standing Committees: There shall be five (5) committees of the Association:

- (A) Executive Committee
- (B) Legislative Committee
- (C) Nominating Committee
- (D) Resolutions Committee
- (E) Ethics, Grievance and Practice Committee

Section 2. Composition and Responsibilities: The composition and responsibilities of the standing committees shall be as follows:

- (A) Executive Committee—The Executive Committee shall consist of the President, First Vice-President, Second Vice-President, Third Vice-President, Executive Director, three (3) Immediate Past Presidents, each serving a three-year term, and three (3) members-at-large elected annually.

The duties of the Executive Committee shall be as follows:

1. Take into consideration and act upon all matters of business between annual meetings.
2. Approve bonds sufficient to meet all legal requirements of the organization.
3. Select depositories in which funds and securities of the Association are deposited.
4. Direct the investment of funds of the Association.

5. Contract for and make necessary arrangements for editing and publishing the Carolina Journal of Pharmacy and other publications as the Association may direct.
 6. Employ the Executive Director and annually review performance and compensation.
 7. Act on appeals from members emanating from decisions of the Ethics, Grievance and Practice Committee wherein sanctions are imposed for violation of the Code of Professional Ethics of the Association.
 8. Have general charge and final authority over all affairs of the Association which are not specifically provided in the Bylaws.
 9. Perform other functions necessary for the efficient operation of the Association.
- (B) Legislative Committee—The Legislative Committee shall consist of seven (7) members appointed by the President. Non-voting advisory members may be appointed by the President as deemed necessary.

The duties of the Legislative Committee shall be as follows:

1. Use its efforts in sponsoring the passage of such legislation as the Association may specifically recommend.
 2. Oppose such legislation as the Association resolves to oppose.
 3. Between annual meetings of the Association, if anticipated legislative developments occur, the Legislative Committee shall ask for a called meeting of the Executive Committee in order that the latter committee may act officially for the Association in advising, approving or opposing such measures or methods as the Legislative Committee may present.
 4. Review and evaluate all legislative/regulatory proposals affecting the profession of pharmacy.
 5. Submit a report to the Association at the annual meeting by the Chairman of the Legislative Committee or his appointed representative.
- (C) Nominating Committee—The Nominating Committee composition and func-

tions are described in Article I, Section 2, Bylaws.

- (D) Resolutions Committee—The Resolutions Committee shall consist of five (5) members appointed by the President.

The duties of the Resolutions Committee shall be as follows:

1. Ensure that resolutions, position papers, and similar proposals which seek to establish Association policy or action are made appropriate and ready for consideration by the Association.
2. Receive resolutions from Association members for study and action at annual meetings. Resolutions must be in writing and presented no later than the first day of the annual meeting if the meeting is scheduled for more than one day and no later than noon if the meeting is scheduled for one day only. The Committee shall not process proposals submitted from the floor as new business.
3. Act on all proposals submitted to it and decide on matters on which the Association should take a public stand.

The functions of the Resolutions Committee shall include:

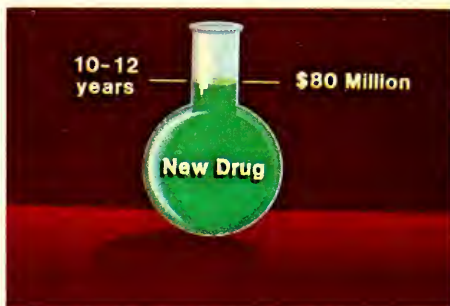
1. Returning to the originators with appropriate explanations those proposals which lack clarity or are duplications, nonsubstantive, poorly formulated or inconsistent with the Association's Constitution and Bylaws.
2. Referring to proper units or officials of the Association those proposals appropriate for their action or for preliminary processing or study prior to submission to the Association.
3. Clarifying, consolidating, and coordinating those proposals wherein potential confusion or duplication exists.
4. Presenting to the Association with recommendations for disposition those proposals which are appropriate to and ready for action by the Association.
5. Reporting to the originator the disposition of any proposal which is not presented to the Association for action.

The Committee shall establish guidelines for submission of proposed actions, policies, or organizational positions and establish timeta-

(continued on page 23)

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Of every 6,000 compounds screened in the laboratories of The Upjohn Company, only one reaches the human-testing stage—and that one has only a 12% chance of reaching the pharmacy shelf.

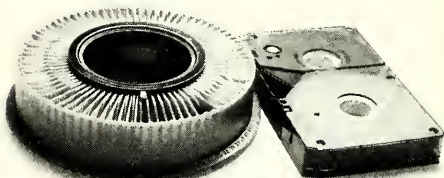
"The Future of Research Commitment" provides insight into

- the costs, risks, and rewards of pharmaceutical research.
- the screening and development of new compounds and the staggering odds against any one of them becoming a marketed drug.
- the huge outlays of time, effort, and money required to bring one new drug from the laboratory to the patient.
- the sense of social responsibility that further distinguishes research-oriented from "generic" pharmaceutical companies.

20 informative minutes

You'll also come away from "The Future of Research Commitment" with new insights into the impact that generic substitution, cost-containment programs, patent laws, and other legislation have on pharmaceutical research.

You may not agree with everything you hear, but the program will make you stop and think about today's threats to the future of pharmaceutical research...and how they may affect you and the future of human health care.



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bles for consideration of such proposals. The guidelines and timetables, after approval by the Executive Committee, should be made known to all members of the Association at least six months in advance of the annual meeting.

The Committee will consider only resolutions and policy statements of a substantive nature affecting Association policy or pharmaceutical education and practice submitted at the annual meeting of the Association from various sources and will process them according to the above five functions. It is the responsibilities of the committees and groups preparing statements on policy to notify the Committee of proposed non-urgent policy requests well in advance of the annual meeting. In the absence of action by the Committee, the proposals shall be forwarded to the Executive Committee.

- (E) Ethics, Grievance and Practice Committee—The Ethics, Grievance and Practice Committee composition and functions are described in Article III, Section 2 of the Constitution.

Section 3. Appointive Committees: The President shall appoint the following committees to be assigned applicable powers and duties, consistent with the Association's Constitution and Bylaws:

- (A) Continuing Education
- (B) Endowment/Consolidated Pharmacy Loan Fund
- (C) Mental Health
- (D) Public and Professional Relations
- (E) Public Health
- (F) Social and Economic Relations
- (G) Third Party
- (H) Time and Place
- (I) Constitution and Bylaws

Other committees may be appointed by the President to perform such special duties as may be assigned by the President and/or the Executive Committee.

Section 4. Term: The term for each member of any committee shall be one year, with the term ending at the close of the annual meeting following appointment. Except for the ex-officio member of the committee, a member shall not serve on any committee for more than four (4) consecutive years

or more than three (3) committees concurrently.

Section 5. Vacancies: Vacancies on any committee may be filled for the unexpired portion of the term in the same manner as provided in the case of original appointments.

Section 6. Powers and Duties: Committees created under the provisions of these Bylaws shall have such powers and duties as are specifically given to them from time to time by the Executive Committee. Each Committee may conduct hearings, perform studies, and make reports exclusively to the Executive Committee as deemed necessary by the Committee, provided, however, all such Committee activity shall be in accordance with the objectives of the Association as defined in the Articles of Incorporation, in these Bylaws, or by the Executive Committee.

Reports of the Committees shall be submitted to the Executive Committee, and shall not be binding on the Association or the Executive Committee. The Committees shall submit such reports on such dates as may be specified by the Executive Committee, and where action by the Executive Committee is requested or required, such reports shall be forwarded to members of the Executive Committee not later than ten (10) days prior to the Executive Committee meeting at which action is to be taken. The ten (10) day report submission requirement may be waived by a two-thirds ($\frac{2}{3}$) majority vote of the Executive Committee.

Section 7. Quorum: A majority of the members of the Committee shall constitute a quorum and the act of a majority of the members present at any meeting at which a quorum is present shall be the action of the Committee. In the absence of a quorum, those members present can develop recommendations for the Executive Committee's consideration, provided the recommendations are presented to the Executive Committee with a statement identifying who was present and that the recommendations were developed at a meeting without a quorum present.

Section 8. Rules and Procedure: Each committee may adopt rules and procedures for

(continued on page 24)

BYLAWS

its own governance which are not inconsistent with law, these Bylaws, the Articles of Incorporation, and any restrictions or other actions by the Executive Committee.

Section 9. Meetings: Committees shall meet from time to time on call of the President or of the Committee Chairman. At least seventy-two (72) hours confirmed notice shall be given to all committee members by the person calling the meeting, or by the Executive Director.

Section 10. Waiver of Notice: The transaction of a meeting, (whether regular or special) shall not be invalid merely because a required notice was not given, as long as a quorum was present at said meeting and the absent members signed a written waiver of notice or gave their written consent to any action taken at such meeting, either before or after the meeting. Appearance at any such meeting for any reason other than to contest notice shall also constitute waiver of the required notice provisions.

Section 11. Expulsion: Committee members who miss more than two (2) consecutive or any three (3) meetings of a Committee without reasonable cause and prior notification to the committee chairman or the Executive Director shall be expelled. Absences shall be explained in writing within thirty (30) days to the Executive Director

Article IV—Academies

Section 1. Establishment of Academies: Any group of 30 or more active members may petition the Executive Committee to form an academy within the organizational structure of the North Carolina Pharmaceutical Association. Such a petition must be based upon a demonstrated need and represent an identifiable and distinct field of practice that calls for special skill and knowledge. All academies shall be established on a statewide basis and membership therein shall be open to all active members.

Section 2. Structure: Each Academy shall have as officers a President, Vice-President, and Secretary. Each academy shall also have a Board of Directors of four active members of the academy.

Section 3. Purpose and Function of Acad-

emies: Academies shall have as their basic purpose the establishment and elevation of practice standards within a given practice area. Specific functions of North Carolina Pharmaceutical Association. Academies are to include educational, professional, governmental and economic affairs related to a specific practice area. Academies shall have no policy making authority with respect to the Association's position on given issues, but may make specific policy recommendations to the Executive Committee

Article V—Membership

Section 1. Active Members: All pharmacists meeting the qualifications of Article IV, Section 1 of the Constitution are eligible for active membership in the North Carolina Pharmaceutical Association. Each applicant will complete a membership form available from the Association office and submit it together with annual dues in accordance with Subsection (1) below.

Subsection (1). Dues: All members shall pay the Executive Director in advance the annual dues as voted by the Executive Committee. Pharmacists residing out-of-state shall pay one-half ($\frac{1}{2}$) the annual dues. Husband and wife pharmacists shall pay one and one-half the annual dues and shall receive one mailing, with the exception of Association mail elections, for which they shall each receive a ballot.

Subsection (2). Non-Payment: Any member in arrears at any annual meeting shall not be entitled to vote. Anyone neglecting to pay annual dues shall lose membership in the North Carolina Pharmaceutical Association.

Subsection (3). Reinstatement: A member suspended from a membership classification under this Article may be readmitted upon compliance with either of the following requirements:

(A) Submission of an application for membership classification as if the person was a new member, accompanied by payment of the appropriate dues. In such case, the membership classification shall date from the time of the reinstatement.

(B) Submission of all dues and assess-

ments in arrears. In such case, the membership classification shall date from the original date elected to the membership classification.

Subsection (4). Resignation: Resignation of membership shall be made in writing to the Executive Director. The Executive Director shall acknowledge all resignations in writing and shall report them to the Executive Committee.

Section 2. Life Members: Any member in good standing meeting the qualification of Article II, Section 2 of the Constitution is eligible for life membership, and thereafter shall be exempt from all future annual dues. The cost of such membership shall be ten (10) times the individual's maximum annual dues.

Also, the Executive Committee is empowered to vote a Life Membership to a member whose contributions to the profession of Pharmacy and/or the Association have been outstanding.

Section 3. Student Members: Any student in a school of pharmacy meeting qualifications of Article IV, Section 3 of the Constitution, and paying the annual dues as determined by the Executive Committee is eligible for membership.

Section 4. Honorary Members: Honorary membership may be conferred upon non-members who have made noteworthy contributions to pharmacy. Nominations for such honorary members shall be made to the Executive Committee who shall consider and act upon such nominations. Honorary members shall have the privileges as set forth in Article IV, Section 4 of the Constitution.

Article VI—Meetings

Section 1. Official Meetings: The Association shall convene an Annual Meeting each year and such interim or special meetings as necessary to conduct the business of the Association. The membership shall be notified at least sixty (60) days in advance of an Annual Meeting and at least thirty (30) days in advance of an interim or special meeting of the Association.

Section 2. At the opening of each Annual Meeting, in the absence of the President or Vice-Presidents, one member of the Execu-

tive committee shall take the chair. In the absence of all, a President pro tempore shall be elected by the members present. In the absence of the Executive Director, the presiding officer shall appoint a Secretary pro tempore.

Section 3. Fifty members constitute a quorum.

Section 4. Registration Fee: A registration fee shall be paid by each person participating in the affairs of the annual convention, except for student members. The amount of such fee shall be fixed annually by the Executive Committee.

Article VII—Student Members

There shall be a student branch of the Association, the membership to be composed of and limited to regularly enrolled students in a school of pharmacy within the State of North Carolina. The Branch must organize itself, elect a president, a secretary, and a treasurer. These officers shall be responsible to the Executive Director of the Association for funds collected as annual Association dues. It shall have a constitution and bylaws which shall be approved by the Executive Committee and then by the membership at the next annual meeting.

Article VIII—Delegates

The Executive Committee shall annually appoint two delegates to the American Pharmaceutical Association and two to the National Association of Retail Druggists.

Article IX—Amending the Bylaws

Every proposition to alter or amend these Bylaws shall be submitted in writing at one session of the annual meeting and shall be decided by ballot at a subsequent session when, upon receiving a vote of two-thirds of members present, it shall become part of the Bylaws.

Article X—Auxiliaries

Section 1. Authorization: The North Carolina Pharmaceutical Association authorizes the organization of auxiliaries of the North Carolina Pharmaceutical Association to be permanent organizations to aid in the Association's activities.

(continued on page 27)

Thanks, Auburn University

School of Pharmacy
Auburn, Alabama



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BYLAWS

Section 2. Membership: Membership of the auxiliaries shall be comprised of either spouses of members or representatives of pharmaceutical manufacturers or suppliers who sell to pharmacists and to the drug trade in general.

Section 3. Dues: Each member of an auxiliary shall pay annual dues to the Treasurer of an auxiliary in an amount approved by the auxiliary and the Association.

Section 4. Function: The Executive Committee of the North Carolina Pharmaceutical Association shall work with the auxiliaries in matters pertaining to the program activities.

Ad Hoc Study Committee

Jean Paul Gagnon, Chapel Hill, Chairman
E. A. Brecht, Chapel Hill
Pamela U. Joyner, Raleigh
Herman W. Lynch, Dunn
Claude U. Paoloni, Chapel Hill
Jack H. Upton, Greensboro
Jack G. Watts, Burlington
L. Milton Whaley, Durham

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Systems Research and Development Corporation (SRD) is proud to announce the addition of the Altos line of computers to its family of hardware for COMPUTASCRIP, The Pharmacy Management System.

COMPUTASCRIP is one of the most flexible pharmacy software on the market today. COMPUTASCRIP currently runs on Altos, Pixel, IBM PC/XT, IBM AT, Wang PC, Victor, Televideo, and Prime computers. COMPUTASCRIP will also run on computers such as NCR, Seiko, and some Radio Shack models, plus most other popular business computers. The Altos addition allows COMPUTASCRIP to offer systems with multi-user and multi-tasking capabilities, 20 megabytes of storage prescription processing software at an economical price.

Altos gives COMPUTASCRIP a family of multi-user systems at an affordable price.

The complete family is compatible, can run multiple terminals, multiple store locations, is expandable, includes networking capability, and is designed for growth. The Altos computer offers more speed, flexibility, expandability and growth than single-user, PC-based systems. COMPUTASCRIP has already been installed on Altos computers in numerous sites in North Carolina, Georgia, and Florida.

The COMPUTASCRIP product line is marketed nationally. All systems include the complete Pharmacy Management Software, as COMPUTASCRIP and SRD do not offer stripped-down, "entry-level" systems. Further, the company is firmly committed to the belief that pharmacists should have the best service, support, and systems available at affordable prices.

Systems Research and Development Corporation is also proud to announce its tenth year anniversary as a software developer and consulting firm in Research Triangle Park, North Carolina. In the past ten years SRD has grown from five employees to over 75, with offices in Research Triangle Park; Vicksburg, Mississippi; and Washington, D.C.

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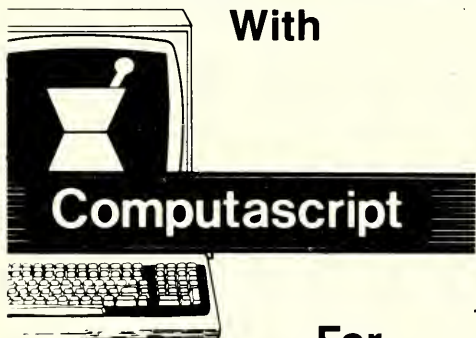
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The 8040-4 is a standard super high performance four-user system, with 40 MB disk storage, 1 MB main memory, floppy disk backup, multiple processors, and 10 MHz performance. The 8040 is expandable to 16 users with 6MB main memory, and 280MB disk storage.

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Meet our 1984 Pharmacy Consultant Panel.



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Lubbock, Texas



Bernard Mehl, D.P.S.
Director of Pharmacy
Mount Sinai Hospital
New York, New York



Marilyn Slotfeldt, Pharm.D.
Clinical Services
Good Samaritan Hospital
Portland, Oregon



Donald Hoscheit, R.Ph.
Vice President, Pharmacy
Osco Drug, Inc.
Oak Brook, Illinois



Charles Lippert, R.Ph.
Community Pharmacist
Lowell, Michigan



John Colaizzi, Ph.D.
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That's what the ten members of our 1984 Pharmacy Consultant Panel provide.

Their views on profes-

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CHARLOTTE WOMAN'S PHARMACEUTICAL AUXILIARY

The Charlotte Woman's Pharmaceutical Auxiliary met at noon on Tuesday, November 13 at the Park Road Y W C A for its annual Christmas Bazaar and luncheon. \$658.25 was raised for the auxiliary's scholarship fund. The scholarship recipient this year is Lois Brooks of Glade Valley, a student at the UNC School of Pharmacy.

Respectfully submitted,

Billie Dagenhart
Corresponding Secretary

GUILFORD COUNTY SOCIETY OF PHARMACISTS

The regular monthly meeting of the Guilford County Society of Pharmacists was held Sunday evening, November 18, 1984 at Swain's Steak House in Greensboro. Following a social hour and dinner, a large turnout of members heard Dr. David Grove, a Greensboro cardiologist, speak about the use of beta blockers, specifically Propranolol, in post MI patients.

During the business session following the program, several matters were brought before the Society for discussion. It was decided that the Society should form a professional relations committee to work with similar committees from the medical and other professional groups in the area on matters of mutual concern. The continuing education requirements for relicensure that began in 1985 were also discussed, with Society members being informed that at least four of our meetings next year would be held in conjunction with Greensboro AHEC programs, each of which would qualify for 2 hours C.E. credit. After reminding those present there would be no meeting in December, President Marilyn McConnell adjourned the meeting.

Respectfully submitted,

J. Frank Burton, Sec. Treas.

HMO/PPO SYMPOSIUM

Attendees of the upcoming Annual APhA Meeting in San Antonio in February will have the opportunity to witness an interesting and informative symposium entitled "HMOs and PPOs: Economic and Legal Problems/Opportunities for Pharmacists."

A panel of four experts will address a variety of important pharmacy practice related issues regarding HMOs and PPOs including: the current status of these delivery systems; their future; their effect on standards of practice and quality of care; their potential economic impact on the practice of pharmacy; whether pharmacists should participate or not; and the legal issues associated with pharmacists forming and contracting with these delivery systems. At the conclusion of the presentations by the panel, members in the audience may participate in a question and answer session.

The Symposium is sponsored by the American Society for Pharmacy Law (ASPL) and the Economic, Social and Administrative Sciences (ESAS) Section of the Academy of Pharmaceutical Sciences. The Symposium will be held on Tuesday, February 19, 2:30 p.m. to 5:30 p.m. in the Four Seasons Hotel, Hidalgo Rooms B&C.

For more information on this Symposium contact Richard R. Abood, J.D., President, ASPL, School of Pharmacy, University of Wyoming, Laramie, WY 82071; Ph (307) 766-6126; or Paul A. Holberg, Ph.D., Chairman ESAS Program Committee, Boots Pharmaceuticals, 6540 Line Ave., Shreveport, LA 71106.

IC SYSTEM ANNUAL REPORT

The IC System, Inc., the collection system endorsed by the North Carolina Pharmaceutical Association has reported collecting over \$3,300.00 for member pharmacies in the period November 1983 through November 1984. This brings the total collected for NCPHA members to almost \$530,000.00 since the program was started in 1969. One NC store has received over \$16,000.00 in uncollected bills from IC System. If you are interested in learning about this program, contact the NCPHA.

CORRESPONDENCE COURSE

Counseling Consumers on Treatment of Fever Blisters and Canker Sores with OTC Remedies
by Thomas A. Gossel, R.Ph., Ph.D.

Professor of Pharmacology and Toxicology, Ohio Northern University, Ada, OH
and

J. Richard Wuest, R.P.H. Pharm.D.

Professor of Clinical Pharmacy, University of Cincinnati, Cincinnati, OH

Goals

The goals of this lesson are to:

1. discuss the etiology and treatment of fever blisters and canker sores;
2. review the pharmacology and therapeutics of OTC remedies for fever blisters and canker sores.

Objectives

At the completion of this lesson, the successful participant will be able to:

1. choose the appropriate OTC agents for treating fever blisters and canker sores;
2. explain the proper technique for applying these OTC agents;
3. know when to refer the consumer to a specialist when self-treatment is not appropriate;
4. differentiate canker sores from fever blisters.

Introduction

Canker sores and fever blisters are often mistaken for one another and referred to erroneously. They are, however, totally different.

Canker sores are painful, annoying, and recurring ulcers that occur on the gums, lips, inner cheek, soft palate and tongue. From 20 to 50 percent of the population reportedly has had a canker sore. They are not contagious.

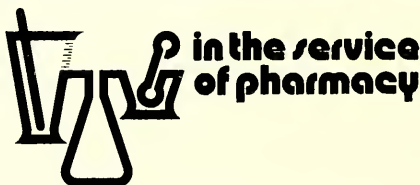
Fever blisters occur most commonly on the lips and within the mouth. Like canker sores, fever blisters are also irritating, painful and recurring. Reference has been made that about 15 percent of the population has them; a more accurate estimate now places the incidence of persons susceptible to a primary herpetic infection (the cause of fever blisters) at 50 to 60 percent of all Americans aged 20

to 40 years. Unlike canker sores, fever blisters are contagious.

With this limited information, it is difficult to distinguish between the two disorders. Since their etiologies and treatments differ, it is important to be able to identify each of them.

This lesson has been prepared to aid pharmacists in properly advising consumers on these two similar looking, but totally different skin/mucous membrane disorders. It will discuss the major factors that precipitate the disorders and the means to control their symptoms, and suggest specific advice appropriate for patient counseling.

Mouth ulcers in general are quite common. Not all oral ulcers are harmless, and many diseases cause them. For example, an early symptom of several potentially fatal blood disorders (i.e., agranulocytosis, etc.) is the appearance of a mouth ulcer. Oral cancer normally appears first as a mouth ulcer. Oral cancer is of special concern because its causes are not known. Table 1 lists specific symptoms which may indicate the presence of oral cancer. Several major infections may also incite them.



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TABLE 1
Warning Signs Of Oral Cancer

-
- Sore on lips or in the mouth that does not heal
 - Persistent bleeding of the tissues in or around the mouth
 - Feeling of numbness, pain or tingling
 - Swelling on the palate or other oral areas
-

There is no easy, absolutely reliable method for pharmacists to readily distinguish between canker sores and fever blisters, and more serious oral disorders. However, if the symptoms and patient's description match the information discussed in this lesson for canker sores and fever blisters, chances are one of these afflictions is present. But even symptoms can be confusing. Bad mouth odor, for example, may signal fever blister formation or certain other serious infections. If recurrent or severe ulceration raises any questions about the patient's conditions, he or she should be directed to a physician or dentist for further assessment. Thus, professional consultation should be sought whenever a sore in the soft tissues of the mouth fails to heal within 2 to 3 weeks.

Canker Sores

The exact cause of canker sores, also known as **aphthous ulcers** and **aphthous stomatitis**, is unknown. A currently popular theory is that canker sores are caused by an alpha-hemolytic streptococcus, *Streptococcus sanguis*, strain 2A. Formerly, canker sores were described as originating from herpes simplex infections, and this misbelief is part of the reason for much of the current confusion that exists between the two disorders. Fever blisters are caused by a virus. Herpes virus has never been isolated from canker sores; *S. sanguis* has been found in over 90 percent of all attempts. Still, not all reference sources yet admit to this organism as the absolute cause.

In addition to the suspected bacterial cause, a cell-mediated localized auto-immunity reaction may be partly responsible for canker sore development. This can be demonstrated experimentally. Lymphocytes taken from persons with recurrent canker sores have a much greater cytotoxic action on mucosal epithelial cells in *in vitro* experiments than lym-

phocytes taken from persons without canker sores.

Factors that Favor Development of Canker Sores. Although not a contagious disorder, the offspring of parents who have recurrent canker sores also have a significantly greater incidence of canker sore formation. The greater the number of recurrent episodes in adults, the more frequent will be the occurrence of canker sores in their youngsters. Young children of such parents who have an active canker sore process often seem to be constantly battling the condition.

These findings taken together, then, strongly suggest an *hereditary connection*. In fact, when canker sores appear in different members of the same family (a common event), the condition is medically referred to as *familial epidemic aphthosis*.

Various **physiological factors** contribute to canker sore development. Menstruation increases their incidence while pregnancy decreases it. Whether or not this is related to plasma estrogen levels (i.e., low estrogen level will stimulate their formation) is not proven.

Certain **stressful conditions** or **emotional factors** seem to increase canker sore development. In susceptible persons, examples may be mild anxiety, arguments with a family member or friend, the death of a loved one, etc. Canker sore activity is especially high during the college years, with about 50 percent of all students reporting canker sore development.

Trauma to the lips, cheeks or mouth increases development of canker sores. Biting the cheek or lips, and ill-fitting dentures are also well known potentiating causes. Likewise, certain foods (e.g. citrus fruits, spices and the other items listed in Table 2) enhance formation of canker sores.

TABLE 2
Examples Of Foods Which May Cause Exacerbation Of Canker Sores

Chocolate
Citrus fruits
Nuts
Highly spiced foods
Sour substances
Tomatoes

CONTINUING EDUCATION

Although each of the aforementioned factors has been demonstrated to cause canker sores in susceptible persons, it must be emphasized that these factors will not cause the condition without the presence of *S. sanguis* (or whatever the other, yet unidentified actual cause). These factors reduce the body's immunological system of defense and the actual cause then takes it from there!

Symptoms. The first symptom of canker sores is usually a burning or tingling (hyperesthesia) that leads, within the next 24 hours, to intense pain. At that time, an observable ulcer on the mucous area is evident. Ulcers are most common on the buccal and labial (lip) surfaces of the mouth. They range in size from 3 mm to more than 15 mm in diameter. On occasion they may coalesce to form single large ulcers (major aphthae) which are much more painful and require a longer healing period. This occurrence signifies a difference in the host rather than cause.

Canker sores vary in intensity from person to person. One individual may develop a solitary lesion, while another person may have several dozen at any one time. Most commonly, 2 to 3 ulcers occur at one time. Some persons are never completely free of canker sores. As some heal, others form.

Canker sores occur to almost the same extent in either sex, with females developing them slightly more often than males. Blacks are rarely affected.

Canker sores normally appear shallow and ovoid, and have a slightly raised yellowish border. This is surrounded by a bright red zone. Within the next 5 to 7 days, the lesions become covered with a yellowish opaque substance which consists of dried tissue fluids, oral bacteria, and white blood cells. The pain lasts 3 to 4 days, although a feeling of slight pressure or irritation generally remains for several more days. Recurring lesions typically occur with less and less severity.

Systemic manifestations are rare and the affected person usually experiences no other symptoms. In severe cases, fever and malaise may be present.

Fever Blisters

Fever blisters are also called cold sores

and herpes simplex labialis. Unlike canker sores, fever blisters are highly contagious. They occur in great proportions in persons living in crowded areas of the country, and in persons of lower socioeconomic status. They are especially prevalent in areas of communal living (e.g., dormitories, prisons, nursing homes, etc. If a person living in such surroundings develops a fever blister, special care must be taken to avoid touching others while the active process is underway.

Herpesvirus hominis Type 1 is the cause of fever blisters. Lesions caused by Type 1 virus must be distinguished from the more serious and, certainly, more contagious genital herpes (herpes genitalis), caused by *H. hominis* Type 2 (Table 3).

TABLE 3
Distinctions Between *H. Hominis* Type 1 and 2

	TYPE 1	TYPE 2
Association	Fever blisters	Herpes genitalis
Contact	Direct, usually from mucosal secretions, saliva, etc.	Direct, usually through sexual contact

Herpes simplex viruses are deoxyribonucleic acid (DNA) viruses and consist of two forms. Type 1 virus is usually (but not always) associated with fever blisters. These lesions commonly occur at the junction of the mucous membrane and skin of the lip and nose. Thus, herpes infections of the mouth (Type 1) are referred to as *herpes labialis*. Lesions may occur anywhere on the body.

Type 2 herpes simplex virus is usually, but not exclusively, the cause of lesions on the genital area. Thus, this condition caused by the Type 2 virus is known as *herpes genitalis*. It is a venereal disease that has reached epidemic proportions. Since this is a topic of great scope in its own right, we will limit this current lesson to a discussion of herpes labialis.

A primary infection is one in which the condition is present for the first time. When an infection arises on adjacent tissue or another area of the body, it is referred to as a secondary herpetic infection. Afterwards, each

flare-up at a previously infected area is called a recurrent *infection*, and this happens to some persons at one to several month intervals.

Primary and Secondary Herpetic (Type 1) Infections. Fever blisters appear as vesicles (blisters) on the mucous membranes of the mouth. The gums, tonsils, and regional lymph nodes may also be involved. There may also be a high fever. If the virus enters the blood, a generalized vesicular eruption on the skin (*herpeticum eczema*) may develop. The eyes may be involved, resulting in **keratoconjunctivitis**. If the central nervous system becomes infected, this results in **meningoencephalitis**.

Primary infections are, fortunately, self-limiting and often so mild as to not cause irritating symptoms. Sometimes an individual cannot recall when the first bout was experienced. They do persist longer than recurrent infections, perhaps lasting two weeks. During this period, the body is establishing antibodies to combat the infection. Once infection has occurred, the virus may be maintained in the body for the remainder of the individual's life.

Between intervals of fever blister flare-ups, the virus is thought to remain dormant within the sensory ganglia neurons that innervate the site of the primary infection. Normally the body's defense mechanisms keep the infection dormant and under control until some stressful situation occurs that lowers the body's immunity (Table 4)

TABLE 4
Factors Known To Activate Recurrent Herpes Infections

Fever
Chilling
Sunburn
Windburn
Menstruation
Upset stomach or GI disturbance
Emotional stress
Excitement
Minor infections
Dental treatment
Allergy to certain foods
Any disease that increases the metabolic rate
Fatigue

Most adults have developed some immunity (antibodies) to Herpes Type 1 virus. Therefore, children are usually born with passive immunity of the same magnitude as that of the mother. But by the end of the first few months of life, this immunity disappears. At this point, children are especially prone to development of fever blisters. Around age 5 years, an active immunity begins to develop via exposure to the virus.

There is no cure or treatment for the condition, only palliative relief of symptoms. Therefore, special precautions should be observed by persons with a history of fever blisters to minimize the factors shown in Table 4.

Recurrent Herpetic (Type 1) Episodes.

Each recurrent bout of herpes labialis starts with a feeling of slight burning or itching. The area feels firm or "full" due to local edema. Shortly afterwards, papules (solid elevations of the skin) and then blisters form. The area may appear reddened because of capillary dilation. These lesions may last for hours before the blisters break. At that time, they take on a yellowish, crusted appearance. The recurring episodes produce less irritation than the primary encounter. For most, they are usually mild and little more than embarrassing, or annoying. A physician's help is usually not required. OTC remedies can offer palliative relief of symptoms.

Vesicles should not be arbitrarily broken because the fluid contains the virus and can transmit the infection to other areas or persons. When the blisters do rupture, special care must be taken to minimize future contamination of other parts of the body or other persons.

Healing normally occurs in 7 to 10 days without scarring or further problems. On occasion, a secondary bacterial infection occurs especially if the lesions are large. The presence of pus under the crust of a fever blister indicates a possible bacterial infection. Whenever healing doesn't occur within a week, the patient should be advised to seek medical care. These lesions may indicate the presence of a much more serious condition.

Treatment of Canker Sores and Fever Blisters with OTC Remedies

There are no specific remedies for curing or

(Continued on page 36)

CONTINUING EDUCATION

preventing canker sores or fever blisters. Thus, the primary goal of therapy for both disorders is the same—to *relieve symptoms*. This includes lessening the pain, decreasing the duration, and, by another nonspecific protective effect, reducing the recurrence rate.

A variety of OTC products is promoted to accomplish these goals (Table 5). According to an FDA advisory panel, many contain ingredients that offer little rationale for use. One of the problems encountered during our research efforts was conflicting uses for the term "cold sore." Sometimes "cold sore" was used to denote fever blisters, and other times it seemed to be used to define canker sores. Medically, cold sores are fever blisters, not canker sores. The following section presents information on what may be expected to help each condition. When appropriate, the findings of the FDA advisory panels that reviewed these remedies will also be mentioned.

Canker Sores. Pain and irritation are best controlled with topical application of a local anesthetic ointment or gel. Benzocaine and butacaine have long been used for this purpose. More recently, a dyclonine-containing product (Resolve) has been marketed. Local anesthetic action can be enhanced when the substance is formulated in a base such as Orabase. This product adheres to mucous membranes much better than other solid forms, and prolongs the local anesthetic effect. Also, Orabase and similar substances place a lubricating shield over the lesion. If the site of irritation is caused by improperly fitting dentures or similar irritants, this action will help minimize further irritation. These products also help soften crusts, which improves the feeling. Many experts suggest that the use of products containing camphor, eugenol, menthol and phenol be discouraged. They believe that each of these substances may cause significant local irritation and potentiate the ulcer condition.

Products containing carbamide peroxide (e.g., CanKaid, Gly-Oxide) have not yet been shown by scientific testing to be universally effective in relieving oral pain. However, they continue to be widely used. The FDA panel on dental products that reviewed carbamide peroxide stated that there is some, but inconclusive, evidence that it may be effective

in cleaning out debris and facilitating healing. The panel recommended that at least one double-blind clinical study be performed to determine whether the substance is truly effective.

TABLE 5
Representative OTC Products Claimed To Be Effective In Treating Canker Sore And Fever Blister Symptoms

Product	Ingredients
Anbesol	Benzocaine, phenol, 70% alcohol
Bacid	Lactobacillus acidophilus organisms
Blistex	Camphor, phenol, peppermint oil, spirits of ammonia
Campho-Phenique	Camphor, phenol
CanKaid	Carbamide peroxide
Dentaid	Benzoin, camphor, menthol, myrrh
DeWitts Cold Sore Lotion	Benzoin, camphor, menthol, phenol, 90% alcohol
Gly-Oxide	Carbamide peroxide
Herpecin-L	Allantoin, pyridoxine, sunscreens
Kank-a	Benzocaine, benzoin, cetylpyridinium chloride
Lactinex	Lactobacillus acidophil organisms
Lysine	Lysine
Numzident	Benzocaine, clove oil, peppermint oil
Periolav	Carbamide peroxide
Proxigel	Carbamide peroxide
Resolve	Dyclonine
Rexall Cold Sore Lotion	Benzoin, camphor, menthol, phenol, 90% alcohol
Tannac	Benzalkonium chloride, benzocaine, tannic acid

*Product labeling is very confusing as to whether they are promoted for canker sores, fever blisters or both.

Additionally, any orally-applied product containing a local anesthetic should be effective in treating pain associated with either condition. For explanation, see text.

Old time remedies such as benzoin, myrrh, and peppermint oil have not accumulated any data of effectiveness, and there is little likelihood that manufacturers will undertake expensive studies to champion their cause.

Fever Blisters. Some authorities suggest that fever blisters should be kept moist to minimize cracking and fissuring which might enhance bacterial contamination. Astringents are, therefore, not universally recommended on these types of lesions. For smaller areas, there is no problem and there is some feeling that depriving the virus of moisture is beneficial.

In fact, there is growing evidence of value in the traditional remedy of placing ether or alcohol on fever blisters. Testimony was given to the advisory panel that, in guinea pigs, drying herpes lesions stimulated the immune system against the infection. The opinion was presented that "... the quicker the drying of the herpes cell, the faster it can be controlled from spreading to surrounding cells. Once the spread of herpes is slowed, the antigen antibody reaction starts to inactivate the herpes virus."

Tannic acid has long been used in fever blister products for its astringent action. One FDA OTC advisory panel has reported that when tannic acid is applied to abraded tissue, it precipitates a protein-tannate film. This mechanical seal of the area can encourage growth of bacteria under the crust, and it strongly advised against its use for extensive burns. However, when used on small areas such as a fever blister, another panel reported that tannic acid is safe. But there is insufficient data to show that it is effective for relieving pain or improving the outcome of fever blisters.

As with canker sores, bland ointment-based products alone, or those containing a local anesthetic, can provide palliative relief of fever blister pain.

Once highly touted for treating fever blisters and canker sores, silver nitrate and phenol are no longer recommended by the scientific community. The potential for serious damage is much too real. While these substances do relieve pain, they may actually enlarge the ulcer.

Topical application of 0.5% hydrocortisone-containing products is not recommended for any viral infection because steroid suppres-

sion of natural immunity may allow for the spread of the infection. On the other hand, some authorities have provided convincing data which imply that some benefit may be gained from steroids. But, this assumes treatment is under the direct supervision of a physician. Only time and further study will answer this question. In the context of advising consumers on OTC's, however, hydrocortisone products should not be recommended for self-medication of fever blisters.

A favorite therapy for fever blisters, as mentioned above, is alcohol or ether, or spirits of camphor. These substances will immobilize the herpes virus. This is the basis for use of 70% alcohol in many OTC products including camphor spirits and tincture of myrrh used for self-treatment. Efficacy of these measures has not yet been established, but these agents nevertheless continue to be used.

Another "old time" remedy is local application of aspirin to the ulcer site. When systemically taken, aspirin can reduce pain; however, consumers should be advised against holding aspirin in the mouth for a prolonged period. Not only is this practice ineffective against local pain, it is potentially harmful and a cause of further ulceration.

Peroral (swallowed) Products for Treating Fever Blisters. Orally taken substances used empirically over the years for treating fever blisters were reviewed by one of the FDA OTC advisory panels. Five ingredients were placed in Category II (i.e., claims are unproven); and none were placed in Category I (proven safety and effectiveness)—see Table 6.

TABLE 6
Recommendations Of An FDA OTC
Advisory Panel For Orally
Administered Remedies For Fever
Blisters

Category I	None
Category II	Acetaminophen Caffeine Chlorpheniramine Phenolphthalein Phenylephrine
Category III	Lactobacillus organisms Lysine

Viewing those items listed as Category II for treating fever blisters, it is difficult to comprehend how an analgesic/antipyretic (acetaminophen), CNS stimulant (caffeine), antihistamine (chlorpheniramine), decongestant (phenylephrine) or laxative (phenolphthalein) could have any beneficial effects on these afflictions. Nonetheless, they have been recommended and used in the past. The panel could not find any justification for such claims.

The Category III agents have also been used for many years. Lactobacillus organisms (*L. acidophilus* and *L. bulgaricus*) are normal constituents of milk and yogurt. They are also among the normal flora in the G.I. tract that are involved in the proper digestive processes. Just how they would benefit a patient with fever blisters has not been elucidated, but a proposed mechanism is that they induce production of human saliva which normally inhibits herpes virus growth.

The advisory panel reviewed information from a number of studies and determined there is limited evidence that Lactobacillus organisms are effective in treating fever blisters. A point to bear in mind whenever recommending their use is that, if they are to be effective, these microorganisms must be kept alive. Therefore, close adherence to their storage requirements (i.e., refrigeration at 36° to 46° F) is extremely important. Outdated products should not be used.

While the case for lysine in preventing/treating fever blisters was not pleaded by any manufacturer, the substance was found to possess sufficient evidence of effectiveness to place it in Category III. Lysine is one of the essential amino acids found in abundance in many foods.

Both the lay and nutritional press have widely recommended lysine as a means to prevent and ameliorate a number of herpes-induced infections, including fever blisters. The OTC advisory panel did, in fact, find several studies in the scientific literature which suggested that lysine:

- (1) may exert an inhibitory effect on herpes simplex multiplication in human cells *in vitro*;
- (2) may lead to rapid resolution of herpetic lesions in humans; and

- (3) may suppress herpetic lesion formation, resulting in new blisters failing to appear, more rapid healing of those formed, and reduced recurrence of the blisters.

However, these studies were uncontrolled, and, therefore, not satisfactory to the FDA for proving efficacy.

The properly controlled study that has been done showed no significant effect of lysine on healing rate, appearance of lesions or intervals of recurrence. However, lysine, taken 500 mg b.i.d., protected a greater number of patients from recurrence than did a placebo. The panel concluded, therefore, that further study of lysine effectiveness in treatment of fever blisters is warranted before a final ruling is made on whether such a claim is allowed.

Patient Advice

Table 7 contains various factors that can be used as guidelines for differentiating canker sores from fever blisters. Since the goal of therapy for both conditions is to alleviate pain and help the body to heal itself as much as possible, the best advice to give patients is to use whatever local anesthetic and/or systemic analgesic that works best for them.

TABLE 7
Is It A Canker Sore Or A Fever Blister?

	Canker Sore	Fever Blister
Symptoms		
Pain	Intense	Intense
Fever	No	Yes
Halitosis	No	Yes
Salivation	No different	Increased
Malaise	No*	Yes
Other	No effect on neck glands	Swollen neck glands
Appearance	Gray to grayish-yellow skin lesions surrounded by erythematous halos. Usually 3mm or more in diameter	Yellow-white ulcer surrounded by red halo. Gum margins swollen and red.

Contagious	No	Yes
Duration	10-14 days; healing without scarring**	10-14 days; healing without scarring**

*If condition is severe, malaise may be a symptom

**Large lesions may leave scars

Recent thinking is that benzocaine, butacaine, and dyclonine are appropriate but that camphor, menthol and phenol may do more harm than good.

Orabase-type topical vehicles have shown good evidence of keeping local anesthetics at the site they are needed longer than other ointment bases.

For canker sores inside the mouth, carbamide peroxide products have demonstrated evidence of cleaning debris and foreign particles out of the ulcer crater and, thus, assisting healing.

An important point to keep in mind about canker sores is that they are usually caused by "something" else. If that other factor is ill fitting dentures, for example, professional advice should be sought.

With fever blisters, old standbys such as tinctures of myrrh and benzoin have not been proven effective by scientific standards. Perhaps it is the alcohol content that works by drying the virus. There is some, but inconclusive, evidence that Lactobacilli organisms and lysine may be helpful.

On the other hand, it can be (and is) argued by some that these agents have not been proven not to be effective. Many believe that they are helpful for them, and these people have the right to use them.

Placed in proper perspective, in the case of fever blister remedies or any other OTC product, the point of the FDA review is to determine what ingredients have proven safety and effectiveness, and what claims the manufacturers can truthfully make. This is a scientific decision that must be based on clinical documentation, not hearsay and testimonials.

In the "real world" of practice however, we all know that there are consumers who swear by certain remedies and aren't concerned about double-blind cross-over studies. While we will not continue to repeat this concept in

every lesson, we ask the reader to keep in mind that the final answer of what to do in each pharmacist-consumer encounter lies with professional judgment. It is our goal to offer all sides of each issue to help in making that decision.

This lesson ends with a reminder that since both canker sores and fever blisters are self-limiting and usually clear within two weeks, whenever they worsen with OTC therapy, last longer than two weeks, or continue to recur, medical advice should be obtained.

Since fever blisters are contagious, the affected individual should be careful to avoid transmitting the virus to the other parts of the body or to other persons. One final point is that while they cannot be cured, fever blisters should likewise not be ignored.

(TEST ON PAGE 41)

EXECUTIVE DIRECTOR POSITION

The Wisconsin Pharmaceutical Association is seeking qualified candidates for the position of Executive Director.

Candidates must hold an earned degree in pharmacy and be licensed or eligible for licensure to practice pharmacy.

Administrative training and/or experience is required. Candidates should be able to demonstrate: executive level leadership capabilities, management abilities, an understanding of legislative regulatory and political processes, and possess strong oral and written communication skills.

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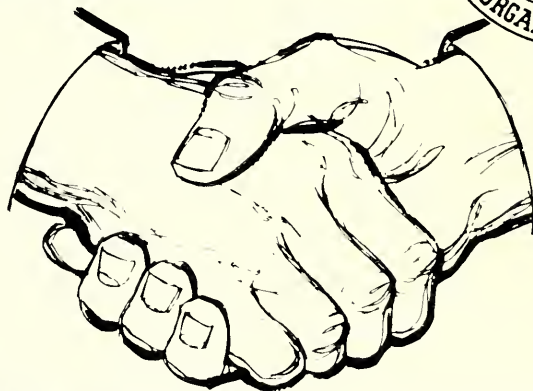
Qualified candidates should submit resume, references and present compensation, no later than March 15, 1985. All information submitted will be treated in a confidential manner consistent with the requirements of the search process.

Required information should be mailed to Patrick Collins, Pharmacist, Chairman Search Committee, c/o Wisconsin Pharmaceutical Association, 202 Price Place, Madison, WI 53705.

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CORRESPONDENCE COURSE QUIZ**Fever Blisters/Canker Sores**

- The drug that has demonstrated evidence that it cleans debris and foreign particles out of mouth ulcers is:
 - benzoin tincture
 - camphor spirits
 - carbamide peroxide
 - tannic acid
- Which of the following drugs has demonstrated the greatest degree of proof of effectiveness for treating canker sore symptoms?
 - Myrrh
 - Camphor
 - Benzocaine
 - Camphor
- When hyperesthesia occurs in patients with canker sores it refers to:
 - burning or tingling
 - excessive cell growth
 - localized bleeding
 - increased ulcer formation
- The microorganism that is reportedly found in the majority of canker sores is:
 - Herpes virus hominis Type I*
 - Staphylococcus aureus*
 - Lactobacillus acidophilus*
 - Streptococcus sanguis*
- The symptom that is common to both canker sores and fever blisters is:
 - fever
 - increased salivation
 - pain
 - swollen glands
- All of the following statements about herpesvirus hominis and its infections are true **EXCEPT**:
 - they act on deoxyribonucleic acid.
 - lesions can occur anywhere in the body.
 - they can remain dormant in the body in between recurrent flare-ups.
 - infections are localized in that the virus does not invade the blood stream.
- Which of the following is contagious from one person to another?
 - Canker sores
 - Fever blisters
 - Both canker sores and fever blisters
 - Neither canker sores nor fever blisters
- The term that is synonymous with aphthous ulcers is:
 - canker sore
 - cold sore
 - fever blister
 - herpes labialis
- The amino acid that has been found to have some but inconclusive proof of effectiveness in treating fever blisters is:
 - ascorbic acid
 - lysine
 - pantothenic acid
 - tryptophan
- The yellow opaque substances that form on the surface of canker sores is made up of all of the following **EXCEPT**:
 - dried tissue fluids
 - inactivated viruses
 - oral bacteria
 - white blood cells
- All of the following increase the occurrence of canker sores in susceptible persons **EXCEPT**:
 - pregnancy
 - stress
 - menstruation
 - trauma
- The active ingredient in Resolve is:
 - resorcinol
 - camphor
 - phenol
 - dyclonine
- The causative agent of fever blisters is:
 - Herpes virus hominis Type 1*
 - Staphylococcus aureus*
 - Lactobacillus acidophilus*
 - Streptococcus sanguis*
- Which of the following is best to recommend for palliative relief of fever blister pain?
 - Chlorpheniramine
 - Orabase
 - Phenylephrine
 - Tannic acid
- A consumer requesting a product containing carbamide peroxide should be advised to purchase any of the following **EXCEPT**:
 - Kaoid
 - Gly-Oxide
 - Herpecin-L
 - Proxigel

Name _____

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This Continuing Education series is a member service of the NCPHA and is available to members at no charge. Please circle the correct answers and send to CE Test, P.O. Box 151, Chapel Hill, NC 27514. A grade of 90% is required for CE credit. You will be notified if your test score is not satisfactory, and may resubmit your test within 30 days of notification. This test is accredited for ONE (1) hour of Pharmacy Continuing Education.



Rex Paramore, R. P. mayor of Nashville, and owner of Ward Drug Company (left) was recently presented with a One Million Prescription Award Plaque, by Ron Vaughn, (R) Roche professional products representative. Roche Laboratories presented this award to the pharmacy for serving the community since 1954 with prescription products and for dispensing over one million prescriptions.

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WEST REPLACES WOODS AT NARD

Charles M. West has been named Executive Vice President of the National Association of Retail Druggists succeeding William E. Woods who retired in late October 1984.

West has been executive vice president of the Arkansas Pharmacists' Association for nine years and is president of Kavanaugh's Pharmacy in Little Rock. In 1982, he was named to the NARD Executive Committee, and was elected Chairman of the Executive Committee at the 1984 annual meeting in Miami Beach. He is a past president of the Arkansas Pharmacists' Association, a council member of the American Institute of the History of Pharmacy and president of the Arkansas Pharmaceutical Foundation. He is a fellow of the American College of Apothecaries, a member of the Eli Lilly and Company C. E. Advisory Committee and is a member of the Arkansas Baptist Medical Center Board of Directors. West was named Arkansas Pharmacist of the Year in 1972.

CHARLOTTE WOMAN'S PHARMACEUTICAL AUXILIARY

The Charlotte Woman's Pharmaceutical Auxiliary met December 11, 1984 at the Park Road YWCA.

Nancy Dente, a member of the auxiliary presented a lovely Christmas musical program. She sings with the Charlotte Oratorio Singers.

The members exchanged Christmas gifts after the program. It was reported that \$827.40 was made from the sell of Christmas trees and poinsettias in December.

Billie Dagenhart

Corresponding Secretary

DEATHS

RALPH LANGDON

Ralph Edward Langdon, 84, died Monday, November 26, 1984 at New Hanover Memorial Hospital in Wilmington. He was a retired representative with Abbott Laboratories and a Life Member of the North Carolina Pharmaceutical Association. Before joining Abbott in 1944, he was associated with pharmacies in Coats, Bonlee, St. Pauls, Lumberton, Maxton and Fayetteville.

CAUL JERNIGAN

Caul Robinson Jernigan, Dunn, died Thursday, November 15. He was 60 years old. Jernigan was a co-owner of Dunn Hospital Pharmacy, and a graduate of the UNC School of Pharmacy.

PAM JOYNER NAMED TO STATE COMMISSION

Pamela U. Joyner, clinical assistant of pharmacy at the UNC School of Pharmacy, and pharmacy coordinator for the Wake AHEC has been named to the NC Commission for Mental Health, Mental Retardation and Substance Abuse Services. Pam is also second vice president of the North Carolina Pharmaceutical Association.

The commission the secretary of human resources and has regulatory responsibilities for certain private mental health facilities as well as for controlled drugs in the state.

JAY SALEM, DIRECTOR OF RECRUITING FOR EDS

Jay Salem has recently been named director of Recruiting for Electronic Data Systems (EDS). Jay has been with EDS for nine years. Prior to being named head of recruiting Jay implemented a wellness program for EDS "LIFEKEY". "LIFEKEY" is centered around nutrition, fitness, and health education. Jay joined EDS in N.C. as director of professional relations for the North Carolina Title XIX Pharmacy program and served in this capacity for one year before assuming the same role for the corporation nationally. EDS has recently been purchased by General Motors and operates as a wholly owned subsidiary with over 26,000 employees. In Jay's role as EDS recruiting director he is responsible for the hiring of over 6,000 new employees to EDS in 1985. Jay is a 1971 graduate of the UNC School of Pharmacy and a member of the NCPA.

PHARMACEUTICAL RELIEF AND CONSULTATION: For sale: Esper 732 Electronic Cash Register. Class A Torsion Balance recently rebuilt by J. A. King Co. Greensboro, (no weights). AES, Medical Blood pressure computer, not a coin-op., patient may use unassisted. Contact Leonard W. Matthews, III (919) 967-0333 or write 1608 Smith Level Rd., Chapel Hill, NC 27514.

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PHARMACIST WANTED: Independent pharmacy in Eastern, NC. No nights or Sunday work. Contact Wayne Avery, (Day) 919-243-3176 or (Nights) 919-237-7342. Send resume to: Wilson Drug Co., Inc. Drawer 2505, Wilson, NC 27893.

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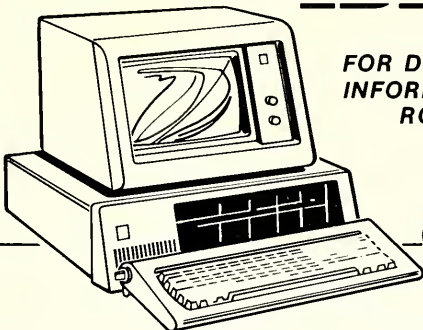


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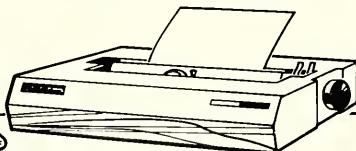


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